COMPUTER GAMING WORLD

VOL. 2, NUMBER 1

JAN. — FEB. 1982

$2.75



HELP WANTED



BATTLE COMMANDER WANTED

Two of history's finest armies need resourceful, daring, decisive leader to defeat enemies of superior size and strength. Experienced strategist desired but not necessary. Must have 48K Apple®II computer with ROM card or Apple®II Plus and 1 mini floppy disc drive. Great benefit package of fun and excitement. Flexible hours. Secure job with no-cut contract. Immediate opening. Applications accepted today at your local game/computer store. VISA and M/C card holders, apply directly by calling toll free 800-227-1617, ext. 335. In California, call 800-772-3545, ext. 335. Or write to: Strategic Simulations Inc, 465 Fairchild Dr., Suite 108, Mountain View, CA 94043.

STRATEGIC SIMULATIONS INC

PROGRAMMER

PROGRAMMER/ ANALYST

Man for man, the Israeli army and Napoleon's Grande Armée are two of history's finest fighting forces. SSI's latest games recreate both in meticulous detail — complete in every facet except one: We've left them leaderless. Now we need someone to take the helm of command – someone like you.

SOUTHERN COMMAND™
Job Description

Superb color Hi-Res graphics reproduces the setting for this battalion-level game which recounts the Israeli counterattack to cross the Suez Canal during the October War of 1973 against Egypt.

The 28-by-39 hex-grid map of the Sinai can be viewed as one strategic screen or in twelve



$39.95

separate screens using scrolling.

As the Israeli commander, you have to smash past enemy strongholds, cross the Suez, and establish a bridgehead. In order to accomplish this, your armor, artillery and infantry units — along with your airstrikes — must successfully protect the slow-moving bridging units as they push towards the Canal.

The Egyptian commander's goal is to stop your advance using the forces at his disposal, which include the potent SAM missiles. His air force can be called upon to negate your aerial threat.

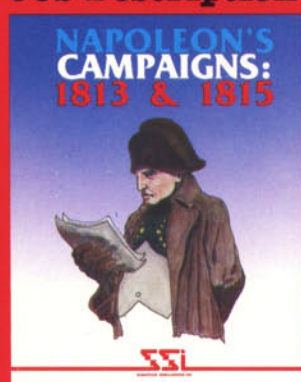
To reflect history accurately, Egyptian and Israeli forces differ in efficiency level and strength points. A unique "delayed move" feature allows for ambushes with infantry and artillery.

Thanks to machine-language programming, the computer can rapidly and efficiently calculate, display, and implement combat results to give you a fun and fast-moving game.

You never need to worry about being out of action for lack of a playing partner. The computer can direct the Egyptians and play you at any one of four levels of difficulty. So whether you're a novice or veteran gamer, you're guaranteed a challenging match.

If you feel you have what it takes (and don't wish to relocate in the Middle East), get SOUTHERN COMMAND today and the job is yours!

NAPOLEON'S CAMPAIGNS: 1813 & 1815™
Job Description



$59.95

This advanced-level, board-assisted computer simulation presents a leadership opportunity where experience in strategy gaming really helps. Aside from fully appreciating the painstaking detail and design efforts we've put into the game, a hardcore strategist can more effectively deal with the complexity, frustrations, and uncertainties inherent in Napoleonic warfare.

Leipzig and Waterloo are the two campaigns featured. Like Napoleon, Schwarzenberg or Wellington, all your commands are sent to your troops and information about them received via dispatch. Knowledge of troop positions and estimates of enemy strength are only as good as your reconnaisance patrols.

The computer plays the individual corps commanders, whose leadership ratings have been preprogrammed based on historical data. How your orders are carried out depends entirely on the corps commanders, who may follow them to the letter or do so with hesitation. Misinterpretation and even outright disobedience of your directives are also possible.

Night, rain, and terrain all affect troop movement. Intricate rules that deal with the effects of fatigue, corps morale, and leadership on battle outcome serve to mirror history faithfully. They also complicate your decision making and strategy planning.

We know we've painted a pretty tough picture of this job, and we don't expect everyone to apply for it. We're looking for those who can meet the challenge and overcome the obstacles. For these people, we guarantee the same feeling of gratification the Emperor himself often felt when he added up his victory points.

Two-player and solitaire scenarios are provided for both campaigns.

Our Want Ad has all the information you need to land this great job.

SSI

COMPUTER GAMING WORLD

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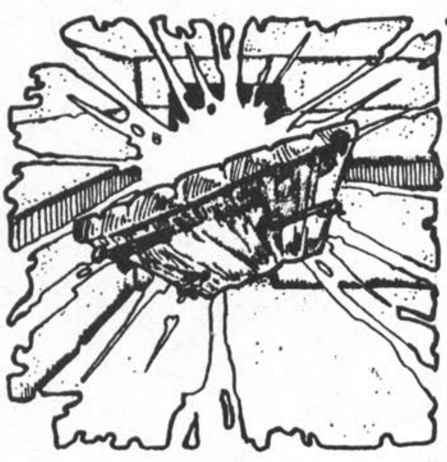
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Psalm 9: 1-2



From the Editor...

The response to our first issue coupled with discussions I have had with many of you convince me beyond a doubt that the computer gaming hobby is a sleeping giant. The social and economic fabric of the baby boom generation, is such that computer gaming connot fail to be a tremendously growing entity in the 1980's.

As the growth continues some recurring subjects seem to interest our readers and industry representatives. These subjects include (among others):

Tele-Communication Gaming
The Coin-Operated Arcade Phenomenon
The History of Computer Gaming
The Copyright Laws and Computer Games
Home Video Games
Computer Game Tournaments

CGW would be interested in reporting news and publishing articles in these fields. If you would like to write in any of these areas, please give us a call or drop us a line. **COMPUTER GAMING WORLD**, 1919 E. Sycamore #203, Anaheim, Ca., 92805. Our phone number is (714) 776-4979.

Future plans for **COMPUTER GAMING WORLD** include a column on coin-operated arcades and a column on programming and game design. We exist as a forum for our readers and for the computer gaming industry. Let us know what you think.

CORRECTIONS

The following corrections relate to Vol. 1 No. 1 of CGW.

Chris Crawford, author of "The Future of Computer Wargaming" is an employee of Atari. The disclaimer as to Mr. Crawford's employer was to have preceded the article but was mysteriously misplaced.

The article entitled "Political Apple" may have caused some of our readers to wonder if CGW acknowledges the existance of the Democratic party. The Republican candidates in the game were duly listed as well as the third party candidates; but the Democrats were left out. Sorry about that. The Democratic candidates in **PRESIDENT ELECT** are: Bill Bradley, Jerry Brown, John Y. Brown, Robert Byrd, Jimmy Carter, Shirley Chisholm, Hubert Humphrey, Henry Jackson, Lyndon Johnson, John Kennedy, Robert Kennedy, Ted Kennedy, Eugene McCarthy, George McGovern, Walter Mondale, Patrick D. Moynihan, Ed Muskie, Jay Rockefeller, Mo Udall, George Wallace, and Andrew Young.

HOBBY AND INDUSTRY NEWS

According to John Williams of On-Line Systems, Atari has lost a preliminary injunction against the distribution of **JAWBREAKER. JAWBREAKER** is still being shipped says Williams.

On-Line Systems has released **MOUSKATTACK** for the Atari 400/800 computer. You play a plumber trying to fix the plumbing as well as trap giant rats which chase you. The Apple version, by Ken Williams, should be out in the second week of January. The Atari version is by John Harris.

The long awaited **TIME ZONE** by On-Line is scheduled for a January 5th release. The multi-disked game will sell for $99.95.

Tom Hirschfeld (see the review of his book HOW TO MASTER THE VIDEO GAMES) is working on two sequels to HTMTVG. The tentative titles are HOW TO MASTER THE VIDEO GAMES VOL. 2 and HOW TO MASTER THE HOME VIDEO GAMES.

Avalon Hill will be releasing at least five games at this year's Hobby Industry of America show (March): **COMPUTER STOCKS AND BONDS, CONTROLLER, COMPUTER FOREIGN EXCHANGE, GUNS OF FORT DEFIANCE,** and **DNIEPER RIVER LINE.** Long range plans include **SHOOTOUT AT THE OK GALAXY** and **CLOSE ASSAULT** (similar to AH's board game, Squad Leader).

Broderbund's newest release is **DAVID'S MIDNIGHT MAGIC.** DMD is a hi-res pinball action game. It runs on the Apple II (48K) and sells for $34.95.

Sirius Software has three games slated for early January release: **TWERPS** (a space rescue mission game), **BORG** (maze game), **SNAKE BYTE** (you're the snake). All three will run on the Apple II computer (48K and disk) and sell for $29.95. In February Sirius plans to release a semi-real action game tentatively entitled **BROADSIDE** (fighting sail).

SIRIUS SOFTWARE has a new address: 10364 Rockingham Dr., Sacramento, Ca., 95827.

SSI's Paul Murray (**WARP FACTOR**) is working on two new space combat games. The first is a tactical game similar to **WARP FACTOR; the second is a strategic space game that can be played with the tactical game.**

SSI is planning to release ROAD TO GETTYSBURG in late February. RTG will cover the Gettysburg campaign using the **NAPOLEON'S CAMPAIGNS 1813, 1815** game system. In March SSI plans to release **GRAF SPEE** (using the **COMPUTER BISMARCK** system but with a better tactical combat resolution phase). Look for a **BATTLE OF BRITAIN** game this summer.

SSI's delayed second edition of **COMPUTER AMBUSH** is tentatively set for a late February release. This one will be infinitely faster than the old version.

Atari user's will be able to purchase an Atari version of SSI's **SHATTERED ALLIANCE** in late January.

INITIAL COMMENTS

In addition to games mentioned elsewhere in this issue the following games have been received by CGW. Most but not all of these will receive more detailed attention in future issues.

Adventures International
Box 3435 Longwood, FL 32750

STAR FIGHTER: Space combat game in which player controls a SC-78503 Star Fighter assigned to rid the galaxy of the dreaded Petro Resource Conglomerate spacecraft. A 32-page attractive rule book guides you through this challenging game. This game is more detailed than the average space combat game. The program runs on the TRS-80 models 1 or 3 computer.

Horizon Simulations
107 E. Main #2
Medford, OR 97501

SHADOW HAWK ONE: A two mode space combat game. In the combat mode you fight against 3-D hi-resolution space ships (similar to Bill Budge space-ships). In the Solarmap mode you seek out the enemy in the galaxy. Capturing enemy ships gives you raw materials which can be used to upgrade your ship. The program available for the Apple and Atari personal computers.

Softape
10432 Burbank Blvd.
North Hollywood, CA 91601

DRAW POKER: A well done hi-resolution Poker game for the Apple II personal computer. You play against a computerized opponent. Computer play can be set for "consistant and deliberate" or "a bit more capricious".

Strategic Simulations, Inc.
465 Fairchild Dr.
Mountain View, CA 94043

COMPUTER BASEBALL 1980 TEAM DISK: Contains all 26 major league rosters for the 1980 baseball season.

COMPUTER QUARTERBACK 1980 TEAM DISK: Contains all 28 NFL teams for the 1980 season as well as some of the great teams of the past 20 years (e.g. 1968 Jets, 1975 Steelers, etc.)

SOUTHERN COMMAND: Strategy game of the Israeli Counterattack Across the Suez Canal during the October War of 1973. A scrolling screen allows the players to view a map that is nine screens large. Look for a feature article on **SOUTHERN COMMAND** in our next issue.

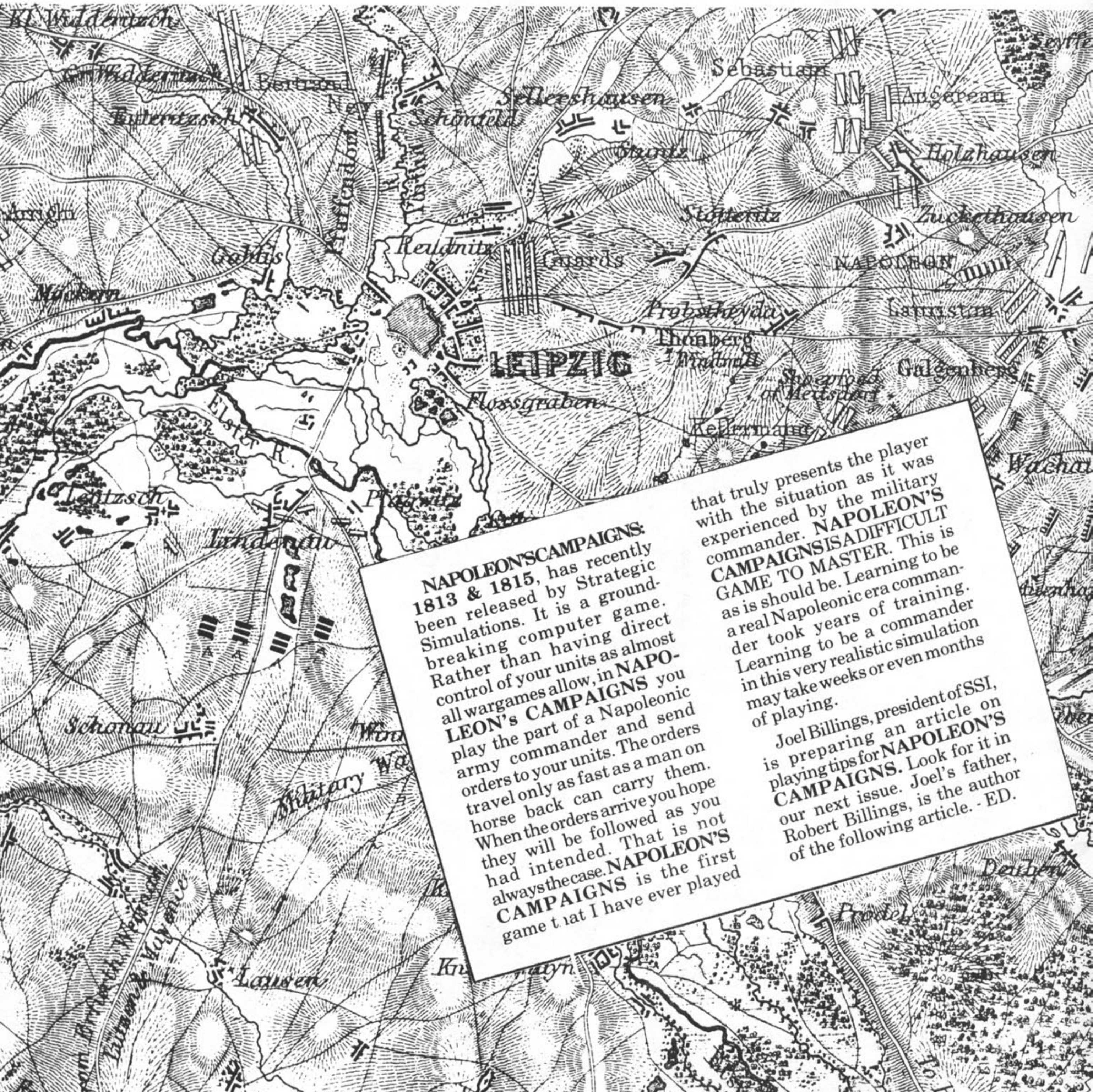
TIGERS IN THE SNOW: A historical wargame for the Apple II computer based on the Battle of the Bulge.

Synergistic Software
5221 120th Ave. S.E.
Bellevue, Washington 98006

THE LINGUIST: A general purpose language translation and tutorial program for the Apple II computer. **THE LINGUIST** has proved to be a popular program in educational programs across the country. The languages covered are Hebrew, Russian, Greek, Japanese, Phonetic, English, French, German, Spanish, Portuguese, Italian, Danish, Icelandic, Swedish, Norwegian, Latin, Esperanto, Dutch, Polish, Czechoslovakian.



REWRITING HISTORY ON THE COMPUTER:
NAPOLEON AT THE BATTLE OF LEIPZIG



NAPOLEON'S CAMPAIGNS: 1813 & 1815, has recently been released by Strategic Simulations. It is a ground-breaking computer game. Rather than having direct control of your units as almost all wargames allow, in **NAPOLEON's CAMPAIGNS** you play the part of a Napoleonic army commander and send orders to your units. The orders travel only as fast as a man on horse back can carry them. When the orders arrive you hope they will be followed as you had intended. That is not always the case. **NAPOLEON'S CAMPAIGNS** is the first game that I have ever played that truly presents the player with the situation as it was experienced by the military commander. **NAPOLEON'S CAMPAIGNS** IS A DIFFICULT GAME TO MASTER. This is as is should be. Learning to be a real Napoleonic era commander took years of training. Learning to be a commander in this very realistic simulation may take weeks or even months of playing.

Joel Billings, president of SSI, is preparing an article on playing tips for **NAPOLEON'S CAMPAIGNS.** Look for it in our next issue. Joel's father, Robert Billings, is the author of the following article. - ED.

by Robert Billings

Note: In the late summer of 1813, Napoleon was south of Berlin with a new army (replacing the one lost the previous year in the long winter retreat from Russia). Although long accustomed to being outnumbered, he seemed now in a desperate situation. He was surrounded by a vast array of armies from all the nations of central Europe——determined to crush him once and for all. Bothered by health problems and no longer possessing his former limitless energy, Napoleon was no longer the Napoleon of Austerlitz and Borodino. What would the Battle of Leipzig have been like if fought by a "different" Napoleon? Two computer game players recently tried to find out using SSI's Napoleon's Campaigns 1813 and 1815. What follows is a recreation of that battle as it was fought out on a computer nearly two centuries after it had taken place in history.

It was late afternoon on October 14, 1813——a beautiful fall day with the air crisp and fresh——when Napoleon rode south toward Leipzig. He knew his enemies would be feeling they once again had him in a bottle waiting to be capped. Would they never learn? He'd only been teaching them now for nearly twenty years that the old way of fighting battles had gone with their pre-Revolution aristocratic delusions.

He knew they would be thinking they had him surrounded and heavily out-numbered. Trapped, they would be thinking——with almost every reigning monarch of Europe, each with his own army, out there ready to pounce. Well, he wasn't as young, as full of energy as he once had been. A sharp, familiar pain in his abdomen gave sudden credence to the thought. Then in a moment it was over, and his mind was back to his immediate problem.

His troops were scattered from Leipzig north to Dessau. Four corps (Victor, Augereau, Lauriston, and Poniatowski) plus Murat with two cavalry corps were just south of Leipzig——over 50,000 men). Many miles north, near Dessau, were the corps of Bertrand, Macdonald, Souham, and Reynier, plus the two cavalry corps of Latour-Maubourg and Sebastiani (approximately 74,000 men). And in between, but closer to Leipzig, was Marmont's reinforced corps and the crux of his power, the Young and Old Guard——altogether about 66,000 men. So although he had no more than 75,000 near any one point on the map, he had 190,000 men and 680 guns in the general area, ready for a quick concentration.

He knew he was heavily outnumbered. First, some distance to the north and west of Halle was the Army of the North under Bernadotte, with close to 50,000 men. Blucher, the doughty old Prussian, had another force, the Army of Silesia, with 55,000 men in Halle itself. Together they equalled more than half Napoleon's entire army. Yet they were only the northern splinter of the force he was opposing. Most of the Allied forces were south of Leipzig, scattered over a large area but containing so many corps from so many countries (many of them with their kings and czars present) that, though it was under the control of Schwarzenberg, it was referred to as the "Army of the Monarchs." Directly south of Napoleon's men at Leipzig were two Russain corps, a Prussian corps, an Austrian corps, and a cavalry corps totaling more than 43,000 men. Perhaps not an impressive number against his own 50,000 just north of them. But this was really only the advance guard of Schwarzenberg's force. To the west were the Cossacks under Platow (8000); to their southeast were two corps of Austrians (27,000); and near Altenberg were Schwarzenberg's main reserve, the Austrian Reserve Corps under Hesse-Homburg and the Russian-Prussian Reserve Corps under Konstantin (altogether about 43,000).

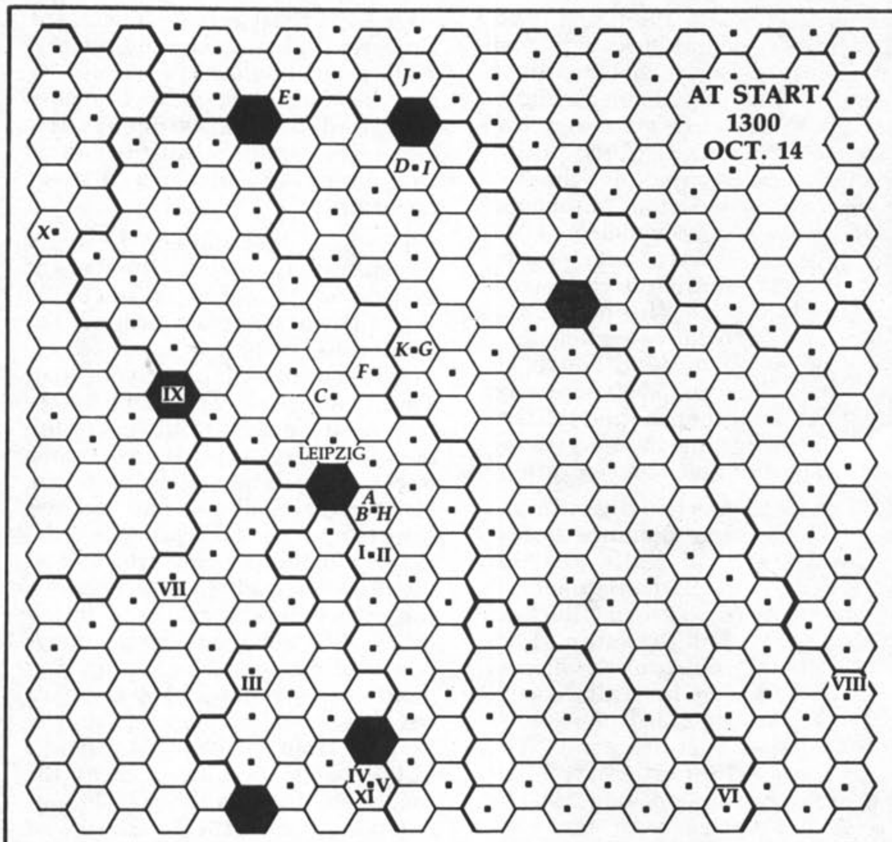
And there were more. Further to the east but available as additional reinforcements were two other groups, Colloredo's Austrian I Corps (nearly 20,000) and the Army of Poland under Benningsen (close to 35,000). Taken all together, his enemies could bring about 280,000 men and 1,300 guns against him. He was indeed, in their minds, surrounded and out-numbered——cut adrift in a sea of powerful armies, foreign princes and alien people.

Or so it must seem to them, the Emperor thought, smiling grimly. Well, they should have learned by now he had changed all the rules they had been playing by. His desperate condition (in their eyes) was, seen from his own, a great opportunity.

The plan was simple. He would concentrate the bulk of his force at Leipzig and fight a major battle with Schwarzenberg's Army of the Monarchs——before its separate pieces could all be assembled. Timing was the key point. Therefore Napoleon's orders to his subordinates had been explicit. All troops were to move immediately. Bertrand, Macdonald, Souham, and Reynier were to march southward to join the Leipzig forces for a quick assault on the 43,000-man advance force nearest the city before they could be reinforced by Schwarzenberg's many powerful corps to the south. Marmont's corps, reinforced by Arrighi's cavalry, would be placed to protect Leipzig from Blucher. Marmont's 22,000 would be able to block the tough old Prussian's 55,000——at least long enough for the major victory to be won south of Leipzig. Finally, two cavalry corps were given special duties. Latour-Maubourg was to hurry to Leipzig to protect the city itself from Cossack raiding parties while the battle was fought further south. And Sebastiani's II Cavalry Corps should circle away from the battle and toward the northern armies' supply lines——thus perhaps causing Bernadotte's 50,000 (and even Blucher's 55,000——although this was far more doubtful) to scurry north to secure their supply lines.

The main thrust, then, was against Schwarzenberg. Orders had been sent to Augereau to start his attack immediately with the forces already there. Now, late in the day, word had already come back that Augereau had done well, causing 7,000 casualties while losing only about 5,000. The full attack would have to await the arrival of Napoleon himself with the powerful Old and Young Guard, as well as Bertrand's and Macdonald's 33,000 from far to the north. It would be a footrace for the first twenty-four hours——but the Emperor estimated everything could be in place by afternoon of the next day, October 15.

To the south another leader of a grand army had been pouring over his maps, estimating distances and pondering odds. Schwarzenberg had decided to make a fight of it. By



FRENCH

UNIT ID.	LEADERS	STRENGTH
A	*Augereau, Victor*	*23,000*
B	*Poniatowski, Lauriston*	*20,000*
C	*Marmont*	*22,000*
D	*Bertrand, MacDonald*	*32,000*
E	*Reynier, Souham*	*29,000*
F	*Mortier*	*14,000*
G	*Drouot*	*29,000*
H	*Murat*	*8,000*
I	*Latour-Maubourg*	*6,000*
J	*Sebastiani*	*6,000*
K	*Napoleon*	*1,000*

TOTAL FRENCH ARMY:
152,000 Infantry; 38,000 Cavalry; 682 Guns.

ALLIED

ARMY OF BOHEMIA	I	Wittgenstein, Kleist	27,000
	II	Klenau	16,000
	III	Gyulai, Meerveldt	27,000
	IV	Hesse-Homburg	16,000
	V	Konstantin	27,000
	VI	Colloredo	19,000
	VII	Platow	8,000
	XI	Schwarzenberg	1,000
Total Army of Bohemia: 108,000 Inf.; 33,000 Cav.; 690 Guns.			
	VIII	Bennigsen	35,000
Total Army of Poland: 28,000 Inf.; 7,000 Cav.; 122 Guns.			
	IX	Blucher	55,000
Total Army of Silesia: 41,000 Inf.; 14,000 Cav.; 274 Guns.			
	X	Bernadotte	49,000
Total Army of the North: 38,000 Inf.; 11,000 Cav.; 214 Guns.			

TOTAL ALLIED ARMY:
215,000 Infantry; 65,000 Cavalry; 1,300 Guns.

rushing his mass of reserves from Altenburg, he felt he could muster 113,000 against Napoleon's probable 115,000. But in addition Blucher, with 55,000 more, would be marching up from Napoleon's right rear. Bernadotte should also be coming down fast from the north. But the clinchers were the two forces far to his right. Colloredo's Austrians should be there the day after tomorrow, and Benningsen and the Army of Poland a day later. Yes, the odds were very good.... Even the Cossacks (who couldn't be depended on for too much in hard fighting) had been ordered to stage a raid into Leipzig. That ought to keep Napoleon a bit off balance.

October 15

The day dawned clear but soon clouds were gathering. Napoleon didn't want rain. Most of his troops were already on the field and he wanted an early attack. It was true his troops were tired——but then, the enemy's must be equally tired. If he was to win, Napoleon knew he had to strike quickly, before Schwarzenberg could gather all his far-flung forces.

Before nine o'clock the Emperor ordered the assault. He could see Schwarzenberg had brought up at least some of his reinforcements. He estimated his enemy would have immediately available about 88,000 men and another 27,000 moving up. Schwarzenberg, however, would soon outnumber him in guns by two-to one. Still, it was close enough for the confident commander. But he decided to wait until Bertrand and Macdonald came up with their 33,000 before launching his all-out attack. Meanwhile, those on the field were sent into the attack.

The Cossacks had threatened Leipzig, but Latour-Maubourg's I Cavalry Corps, riding through the night from the far north, had arrived right on schedule and fought them off. But to the northwest of Leipzig, there was that major threat of Blucher's army. Word had come that the aggressive Prussian was quickly preparing to assault Marmont's holding force.

By the middle of the day the Emperor had evidence that he had won a major victory in the first big clash of major forces on the field south of Leipzig. For the loss of little more than 7,500 men, he had caused an estimated 15,000 loss to Schwarzenberg's force. Because of troops fatigued by the fierce fight after a night of marching, Napoleon decided not to press the attack further until the arrival of Bertrand and Macdonald.

Schwarzenberg meanwhile, felt equally confident. His troops had arrived from Altenburg in time to hold off Napoleon's main assault——though the battle had been costly. His troops had fought well so far, against that living legend of military genius, Napoleon himself. And he had a strong point in his favor in Blucher's force. However, he wondered where Bernadotte and the Army of the North were? Were they moving up as ordered?

About the same time, Napoleon knew that he had trouble in the making. He had received word that Marmont was under hard attack by Blucher, had suffered heavy losses, and was close to breaking. The Emperor, ever the realist, decided to call off his afternoon attack even though Bertrand and Macdonald had arrived on schedule. The troops, he knew, would not be ready for such a major battle after their long march.

But there was good news from Leipzig. The I Cavalry Corps had routed the Cossacks, destroying perhaps half their entire force. That would protect his rear from the closest threat. But the bigger one from Blucher loomed larger every minute. He sent orders to Marmont to make a planned withdrawal across the Elster River.

The orders were given none too soon. Blucher struck again with a blow so heavy Marmont's forces were sent back demoralized. Yet the withdrawal plans had proceeded far enough to save the force from a rout.

Despite some heavy losses they were able to retreat across the river.

But now more perilous news arrived. The Emperor's most remote force, the two corps under Souham and Reynier, had been making good time southward. Napoleon had planned to use them as a block to stop Blucher from taking Leipzig. Yet a late report made clear this would be impossible. Those two corps were being held up by——of all generals——the slow-moving Bernadotte. Somehow he had got his Army of the North moving fast enough to intercept them before they could reach Leipzig. Well, in war there were no certainties. Napoleon would have to do what he liked least——draw two corps away from the main battle and send them to protect Leipzig from Blucher. He began to consider it possible that he would not be able to destroy Schwarzenberg's main force before the other Allied reinforcements arrived. If so, the Emperor would have to be sure of an open retreat route for his army to squeeze through. Considering his situation, hemmed in by superior forces on all sides, it would be threading his entire army through a narrow-eyed needle, with disaster hovering close on either side. By the end of October 15, Napoleon knew he was in for a genuine battle. No quick and easy victories now.

October 16

The next morning saw light rain falling over the whole battle area. Exhausted men struggling out of their brief, disturbed sleep prayed for the rain to continue. But all too soon it had stopped and preparations were going forward for the day's major battles.

By five o'clock Schwarzenberg had been informed of Bernadotte's collision with the corps of Souham and Reynier north of Leipzig. Well, he thought, that will hold up some of Napoleon's reinforcements, even if it is doing the same to mine. The news from Blucher was good——Marmont routed. Yet Blucher's troops were dead tired from the constant marching and fighting. They had to be given some rest. Schwarzenberg prayed for the rain to continue——at least long enough to hold off Napoleon's main attack south of Leipzig until more Allied reinforcements had arrived.

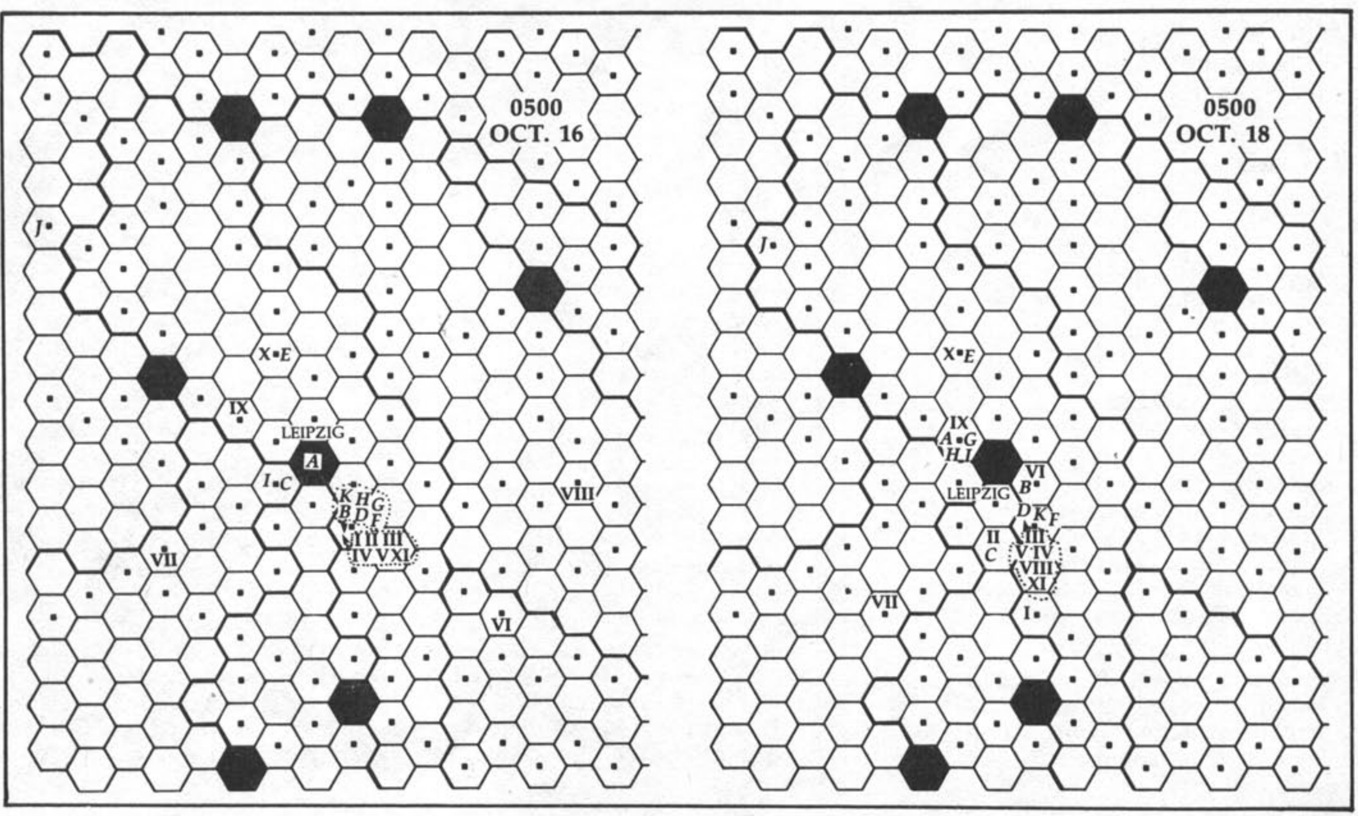
Some miles to the north, the Emperor juggled troops to meet the demands of the day. Souham and Reynier, it was clear, would not be able to block Blucher——held up as they were by Bernadotte. But Victor's and Augereau's corps, hastily withdrawn from the main battle against Schwarzenberg the previous night, had reached Leipzig. Now they should be able to move down the road to Halle and stop the victorious Blucher.

By noon the rain had stopped and Napoleon sent in his main attack south of Leipzig. His Guard Corps was in the lead. In a short while the entire area was engulfed in smoke and flame, with hundreds of guns pouring fire into tens of thousands of men. Napoleon was using some of his best troops, and they were having their effect. The reports were good. The Allied troops were losing heavily. Schwarzenberg's troops seemed ready to break. Yet still they held, taking heavy casualties but standing firm.

By late afternoon Napoleon had to reduce the scale of his attack. The odds were shifting. Losses had been much more nearly even in the afternoon. The Guard itself was worn out. Bertrand and Macdonald had to be thrown in. His reserves were rapidly diminishing. Finally, about seven o'clock, he stopped the assault altogether.

Word came in from Victor and Augereau's battle with Blucher, who was now pushing harder than ever. The French troops, after the bitter fighting against Schwarzenberg on the 15th and the hurried march back to block Blucher during the night, were taking heavy casualties again and seemed ready to break. Napoleon saw what he had to do.

He sent word to authorize retreat for the battered force. Could no one stop Blucher? The next day he would send the recovered troops of Marmont as well as the Guard itself. But now a new danger surfaced. He began to get reports of the Army of Poland's



approach from the east. His original plan was obviously not going to work. The French assault was not routing the enemy. Small victories were not enough. He would have to retreat from Leipzig.

Orders went out for all troops not moving toward Blucher to rest during the night. He would need their fighting strength on the morrow. Then, just before midnight, came a glimmer of good news. Although Augereau had begun his retreat over the Elster, Blucher had discontinued the attack against him. Napoleon decided to take a chance. He ordered Augereau back across the river. The First Cavalry Corps were now getting into position to help. Together these forces might be able to hold Blucher. If they could, the new troops coming up——especially the Guard——would have a chance of routing Blucher. This would both hold open the escape route for the army and make it possible to salvage one claim for victory out of the deteriorating situation. Now it was Napoleon's turn to pray for rain the next day.

October 17

In the early morning the rain began to fall on the weary troops. Napoleon's first feeling was one of relief. This would mean a few hours more of much-needed rest for his soldiers. His course was now clear. Let his troops get some rest, then get Marmont's recovering corps, Murat's cavalry corps, and the Guard into position for a devastating assault on Blucher——blow him right out of the battle and open up a retreat route to the west. But to do that the rain would have to stop in time for him to get his troops moving and ready for the attack by the 18th. And most of all, the troops left behind fighting Schwarzenberg would have to hang on in a bitter-end fight of desperation. To make matters worse, it was becoming clear that both Benningsen's Army of Poland and Colloredo's Austrian Corps were beginning to come into action. If this were true the fat was really in the fire. Now he would be even more desperately out-numbered——especially in the key area south of Leipzig where his troops were struggling in their bitter rearguard action. The Emperor could see it was going to be a close call, even if he were able to pull off the miracle of threading his army through the shrinking eye of the needle.

Further south Schwarzenberg, riding behind his battle lines, sensed his position improving. At first it seemed that Benningsen was coming into the battle in perfect position——to the left rear of the main French troops, with a chance of cutting them off from Leipzig. Then to his to Leipzig.

Late in the day, the rain having stopped, Schwarzenberg called for an all-out assault. He was sure he was dealing with only a rearguard now. Yet to his dismay it maneuvered so well against his over-cautious subordinates that he found his attack was yielding him no real victory. By the end of the day he sensed the master was still in control, despite the mounting odds against the French.

October 18

The day dawned slightly overcast but soon cleared. Schwarzenberg had been hoping again for rain for Blucher, whom he feared might soon rout. His other attacks seemed to be getting nowhere and his losses had been heavy. He sent the Cossacks and 15,000 infantry to the west to block the route of a possible retreat. Otherwise he ordered most of his troops to stand against what he felt were still impending offensive moves.

Napoleon would have been glad to know that Schwarzenberg was worried. To him it was completely otherwise. He had been pouring corps after corps against Blucher to the northwest, and that tough old Prussian was still attacking. Bernadotte to the north was being held off by Souham and Reynier——but these troops, out-numbered two-to-one at the start and taking heavy losses for some time now, might not hold much longer. He was trying hard to keep his weary, exhausted corps together until a retreat route could be established and its flanks secured. But in addition to all of Schwarzenberg's other corps, he now had the Army of Poland working its way around his eastern flank. This morning in particular the field seemed to be in a state of chaos, with corps scattered all about the countryside, weary troops fighting equally exhausted opponents, and neither sure which would rout first.

Finally at five in the afternoon the news came to both commanders. Blucher, determined old soldier that he was, having absorbed blow after blow from Napoleon's corps stolen from other parts of the field, at last routed. The French had attacked first with Augereau, but after fierce fighting that force had routed. Augereau however, had been ready with the Guard Corps and had sent it in. At first the losses were heavy, but this most trusted body of Napoleon's men persisted, and Blucher finally gave way, his troops streaming up the road toward Halle.

Napoleon knew this was his only chance; the door to the west and safety would now be open——for a very brief moment. He would have perhaps one more day. Everything would have to be done by then.

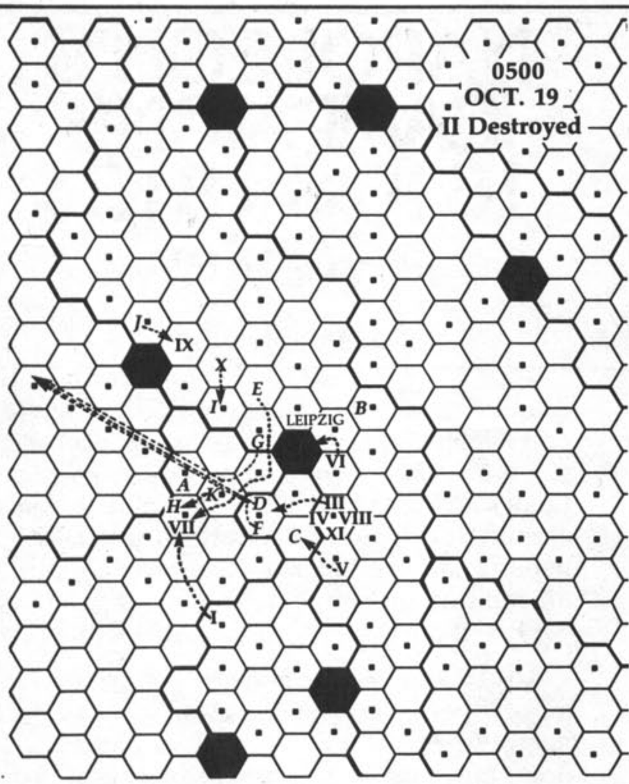
Before him he had only the weak remnants of the Cossacks. Murat was sent ahead to brush them aside. To his north, Bernadotte was closing in. Souham and Reynier had had to be withdrawn south to the main retreat rout. Now there was only Latour-Maubourg's small cavalry corps to hold off this entire Army of the North. Behind him to the east two corps under Lauriston and Poniatowski, fighting off the Army of Poland, had been shunted northeast and appeared lost, completely out of contact with the main army. Still, they appeared to be holding out. The main corps of Schwarzenberg were pushing hard on the rear of the Emperor's retreat column, and he knew they would soon be coming round to cut him off from the south. The Emperor felt he was running down a tight iron corridor whose walls had suddenly started to contract and close him in.

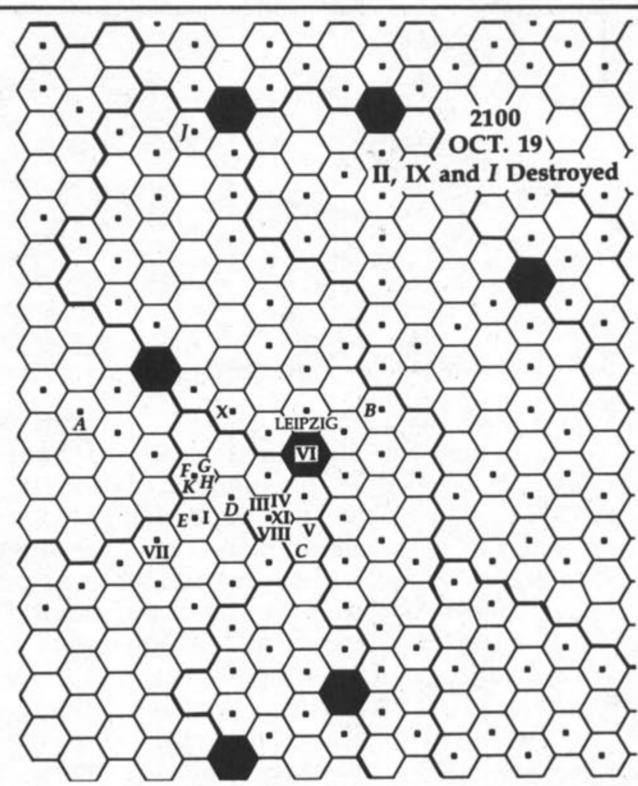
October 19

Like a juggler with all his ninepins in the air at once, Napoleon maneuvered his troops down the narrow corridor. The corps of Bertrand and Macdonald and even the Guard Corps itself, all exhusted, had somehow managed to cross the Pleisse in the night and were for the moment safe——but in very bad shape. Napoleon ordered Marmont's force to take up the rearguard action.

One thing he could do to preserve a shred of victory. He had Sebastiani's cavalry corps free near Halle——placed there to disrupt Blucher's supply line. He was in perfect position to attack Blucher's troops streaming back up the road toward him——to harry them, give them no time to reform, push them until they were completely destroyed. For even one small cavalry corps would be enough to continue the rout of that formerly powerful army of 55,000 men.

Another small cavalry corps was also giving yeoman service. The First Cavalry Corps was fighting gallantly to hold Benardotte's army north of the Elster through the long dragging afternoon. Finally they gathered their remnants and launched a last desperate charge. The Army of the North quivered with the shock,





were held momentarily, then absorbed it——shock, First Cavalry Corps and all. They reached the river to find they were too late. Napoleon's last troops were passing safely on the other shore. But the First Cavalry Corps had simply disappeared into the mass of its enemy.

For the main body of the army it had been a hard day of fighting while running, holding off superior forces from the left, the right, and the rear, while pushing the Cossacks out of the way in the front. The Emperor was rushing Souham's and Reyniers corps forward to support Murat——for he knew Schwarzenberg would surely have a heavy force take the place of the Cossacks before long. The rear was still holding. Bertrand and Macdonald were finally routed after dark but were able to retreat across the Elster and keep up with the army. For Marmont's troops, in spite of their gallant fight all over the field from the opening battle against Blucher, it was too late. Caught at the end of the column, unable to break loose from their rear guard action, they were finally cut off. Like Lauriston's and Poniatowski's men, from whom now only faint sounds came from far to the east, they would have to be left to their fate.

Napoleon was not through the gauntlet yet. Murat had defeated the Cossacks before five o'clock in the afternoon, but then was struck by a much larger force. Fortunately Napoleon had rushed forward with his staff and headquarters——800 strong——to be at the crucial point. Murat's men held at first—— then finally broke. For a few moments there was only Napoleon and his headquarters' troops to hold back the waves of enemy about to engulf the narrow retreat corridor from the south. The horses of the charging 800 reared as their riders slashed about them. A precious few moments were bought. Then, just in the nick of time, Souham and Reynier appeared streaming forward through the night's shadows to hold back the threatening flood and keep the retreat route open.

October 20

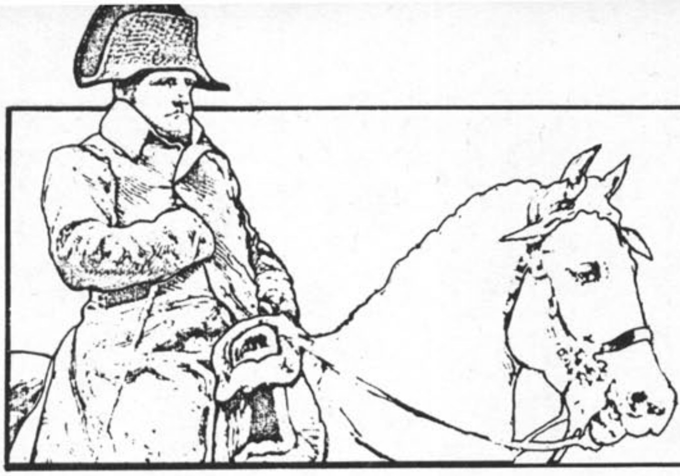
Schwarzenberg sensed that he had done well——but the cost had been terrible, and he knew that he had almost had the master in his clutches, only to let him escape.

Napoleon was riding with his retreating troops, tired, sick, and physically exhausted, but knowing he had somehow once again held everything together and kept himself from defeat. He knew he had won no great victory——though a victory could be claimed. Blucher's army was now being rapidly destroyed, still pursued by Sebastiani, Poniatowski, Lauriston, and all their troops were lost. And Marmont, cut off and left behind in his last brave rearguard action, must soon surrender too. Latour-Maubourg's First Cavalry Corps, gallant defender against the Army of the North, had now disappeared into the mass it had held back. But except for those elements, the rest of the army's units were intact and in orderly retreat. Yet for every one of those 84,000 men retreating in his column, there lay another back there around Leipzig. Total French casualties had been 80,000. And another 21,000 would soon surrender. Well, he would return to France and raise another grand army. And then....

But it was getting harder. This time his men and his own resources had held. Leipzig had not been the endgame for him. But he was older, more exhausted, sicker. Would there come a time soon when the great Napoleon would not be able to pull it off? When he would ride out to meet his.... He wondered idly for a moment what would be the name of that great city (or perhaps some small, unknown country town) that would ring down through history as the site of his final defeat.

Well... at least it wouldn't be Leipzig.

Note: The actual battle of Leipzig resulted in 110,000 French casualties, 90,000 Allied losses and the unseating of Napoleon in 1814. The game recounted in this article resulted in 100,000 French losses, 145,000 Allied losses, and a much less certain outcome of the 1814 campaign.



NAPOLEON'S CAMPAIGNS 1813 & 1815: A Review

by Daniel Weitz

I've always been curious as to why generals had so many aides-de-camp hanging around; having played **NAPOLEON'S CAMPAIGNS 1813 & 1815** I now understand that their primary function was to convey information and to deliver orders. The game includes seperate scenarios on Leipzig (1813) and Waterloo (1815). In the solo version of the Leipzig campaign you are Napoleon, and attempt to defend your supply depot at Leipzig against 300,000 Austrians, Prussians, Russians and Swedes which are attacking from all points of the compass. In that of the Waterloo simulation you are Wellington attempting to defend both Leige and Brussels against Napoleon's last fling, while simultaneously trying to crush the French which you outnumber two to one.

The game is a corps level simulation with the emphasis on limited intelligence and the problems of command control. Although I've played wargames for over twenty years I have never encountered a simulation which handles the above so well. Through a series of dispatches your corps commanders relay information to you based upon the patrols of their light cavalry, the accuracy of which depends upon the comparative strength of the various screens. This information is however, often quite out of date, and you might receive a dispatch sent at 9:00 AM at 9:00 PM. In addition, you are bombarded with vast amounts of intelligence reports which may or may not be accurate. Having decided upon a plan of action (striking the map with your finger and shouting "We will crush them here!"), it merely remains to order your eleven independent corps commanders to concentrate their forces at the appropriate spot. Unlike cardboard counters on a paper map, they are often quite uncooperative. They may decide not to push their troops too hard, or to attack at a secondary point, or to ignore you because your messenger never got through. If and when they show up at the battlefield, and if you've discerned the enemy's strategy, a long and bloody "Napoleonic"battle takes place. Heavy and light cavalry; riflemen, grenadiers, light and line infantry; artillery; and the historical tactical abilities of the various commanders such as Kellerman, Uxbridge, Murat, and Blucher to name but a few, are factored into the battle in different ways depending on your tactics and the terrain. The horrendous casualties can often cripple the victorious army while dispersing the vanquished. The above is handled in an exciting and challenging manner and shows why even the Emperor had an occasional bad day.

All of this takes place on a nice high-res strategic map. There is another map that is a disaster. The game comes with a hard-copy map of the campaign areas and a series of cardboard corps markers and estimated enemy strength chits, which seem to serve no really useful purpose other than as an attempt to discourage game pirates. The hard-copy map is both ugly and confusing. Instead of using the pseudo-antique style of the instruction book, we are presented with hexes in various shades of brown and grey, with a confusing array of little red dots that represent the highways. The map on the screen (which is displayed in segments) could also be somewhat improved.

One of my other interests is wargaming with 15mm Napoleonic miniatures, and I had hoped that this game would be a useful tool when my friends and I wished to play a campaign game. To a certain extent this has been fulfilled, as in the two-player version of the game we can resolve tactically with our own miniatures the engagement which the computer describes as about to take place. Unfortunately, there is no way for me to tell the computer the result of my tactical encounter with miniatures. I had hoped that Mr. Billings and the gentlemen at SSI would have made provision for this.

This game is a must for anyone interested in the problems of army-level command or Napoleonic simulations. If Napoleon had an Apple and this game at Leipzig, he would have seen the handwriting on the screen and headed for the Rhine, kicking his aides-de-camp all the way.

NAPOLEON'S CAMPAIGNS: 1813 & 1815 runs on the Apple II (48K) computer with Applesoft in ROM and sells for $60.

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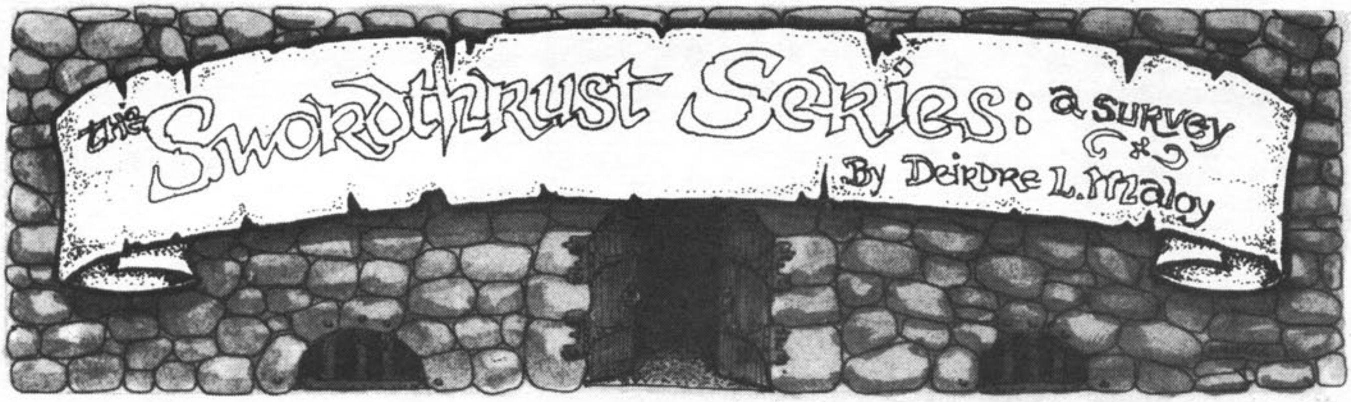
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Although there are many fantasy role-playing computer games on the market, the Swordthrust series is very different from most. Most fantasy games I have seen use the **Dungeons and Dragons** concept of character class--a character is a magician, fighter, thief, or priest; he cannot have any abilities of another class. **Swordthrust,** however, uses a system more like another popular fantasy role playing system called **Runequest**--that is a character can and should have skills in as many areas as possible. Spells, armour, and weapons can be bought, and many things can be found while on an adventure.

Swordthrust is a mixture of a puzzle-type adventure and a "hack-and-slash" game (such as **Ultima**). This is the best role-playing I have seen in any computer game, and better than some **Dungeons and Dragons** or **Runequest** scenarios I have played in. Currently, there are five **Swordthrust** scenarios available (with, hopefully, more to come), each sold separately. Each scenario has a unique goal and most have time limits.

Swordthrust has some unique features. A useful feature is an "auto-repeat" of the last command by pressing return. This saves a lot of typing (and errors). Also, there is the "suicide plan" which allows you the option of refusing less-than average characters. Armour, weapons, and shields are all subject to breakage, which is not my idea of fun--but it is fair.

Initially, the most useful skill is charisma. Someone with really high charisma (such as my character Jordan's 22) will be able to start off initially with chainmail, 4 good weapons, a Power spell, and perhaps training too. However, no statistic is useless, and hardiness is perhaps the single most important.

One thing to watch is fatigue. Every time you take damage, it fatigues you . Fleeing and casting spells also fatigue you. If you lose consciousness, there is a chance you will die if there is a monster in the room (or if a monster wanders by). Your chance to hit is also lowered by fatigue, which seems very reasonable.

In the first scenario, no provisions are made for saving the game. This is a hassle because there is a lot to it, and even though I know most of the scenario, it is still difficult to complete it without dying. The next four scenarios, however, all have save options. However, this is a different type of save--the next time you run that disk, the scenario will be started at the saved point. This game does not (rats!) allow reusing characters that should be six feet under.

The first scenario seemed short at first. Later, I discovered how much there really is and drowned trying to get all the treasure out. The best rule of thumb is not to bother with anything unless you have to and search everything as best you can. Some options are not immediately evident, but careful thought will bring them to light. A Power spell, all anyone can afford at the beginner level, may prove invaluable. However, it can throw fireballs back at the user as well as heal, so be CAREFUL!

In the Vampyre Caves (scenario 2), the rats will probably like you, but neither the vampyre or his hunters will. The better you do finding treasure on the first scenario, the better set up you will be for this one. Spells are infinitely valuable--don't overlook them. By this scenario (if you are attempting them in order), you should be able to afford at least a Heal spell, and possibly a blast as well.

Kidnapper's Cove (third scenario), is where you get to play delivery boy and Errol Flynn in the same scenario. The object is to rescue a kidnapped boy and get him his medicine. The time limit is definitely a factor in the game. Hint: water washes off dust, but beware of tridents unless you are very experienced. If you flee from a trident, he (at least everytime I've tried) automatically follows you.

The Green Plague (fifth, and most recently released scenario) starts with your character contracting the disease, thus giving him a very valid reason for finding a cure. Don't make the mistake I did. I spent so much time reading the gray book "Ringworld Engineers" that I ran out of time and died of the plague.

GALAXY: DESIGNER'S NOTES

Tom Cleaver



ED. NOTE - I was introduced to computer gaming by Tom Cleaver. A few years ago Tom showed me his multi-player space warfare game entitled **GALACTIC EMPIRES** (not to be confused with Broderbund's Galatic Saga series). It was then and, I feel, still is the best multi-player game available for the personal computer. Now that Avalon Hill is distributing **GALACTIC EMPIRES** (under the name **GALAXY**) the game will get the kind of attention it deserves. It runs on the Apple II (48K) and Atari 800 (32K) personal computers. Here are Tom Cleaver's thoughts about the development of **GALAXY.**

HISTORY

GALAXY did not spring forth full grown from the head of Zeus. Like all things on this earth (and off), **GALAXY** evolved from lower forms.

One Friday evening I was woolgathering when the idea for a computer game crossed my mind. Now, I want you to be aware that this was not the first time that a game idea had occurred to me.[1] But most of my ideas up to this time had led to dead ends. However, this idea came to me with such clarity and detail that I knew it couldn't fail. That weekend I sat down before my Apple II and programmed the first version of what was eventually to become **GALAXY.**

I called it **GALACTIC EMPIRES,** and it was an instant success with my friends at the Falls of the Ohio Wargame club. My ego inflated by their enthusiasm, I got a bit of free publicity in some of the gaming magazines, and soon I was selling program listings by mail for $2.00 each.

The next step was to find a company willing to publish my game. I sent samples to a few software houses, but the only one really willing to publish it was a small company on the East Coast. And they wanted revisions. So **GALACTIC EMPIRES** was translated from Integer BASIC to Applesoft, modularized, polished and debugged, a process taking about 100 hours of work. It was published in late 1979.

For several reasons which are best not explained at this time, **GALACTIC EMPIRES** did not sell as well as I had hoped, in spite of quite favorable reviews by the critics. I therefore sought to have it published by a larger company.

On a whim, I sent the game to Avalon Hill, not really expecting them to accept an "outside" design. But to my amazement and elation, AH was impressed with **GALACTIC EMPIRES** and authorized me to do a rewrite of the game for the Apple II, and to supervise the production of versions for the Atari, TRS-80 and PET.

I began by hiring the best programmers

(available) money could buy--students in electrical engineering and computer science at the University of Louisville. We worked together for four months to produce the pinnacle of the game's evolution: **GALAXY.**

Writing the first program in Integer BASIC was easy, and the product of the programming was a "good" game. But it took two years of slow and often painful evolution to advance that game to its present state. I think the effort was worth it. I hope you do too.

PHILOSOPHY

The typical computer game is a solitaire arcade-style game with fancy high-resolution graphics. It requires lots of manual dexterity and good reaction time. I like this kind of game. But not all the time. Where is the comradery of playing a game with a friend? Where is the intellectual challenge?

When I set out to design a new computer game, I was looking for one which would be multi-player and which could be played repeatedly without growing stale. What I ended up with was sort of a combination of **STARTREK, DIPLOMACY** and **RISK.** It can be played by up to 20 players, and no two games are ever alike.

I also wanted to take advantage of what the computer does best, not graphics and animation, but number crunching and bookkeeping. Thus **GALAXY** does some fairly sophisticated mathematics when calculating movement and combat results, and it handles all the record keeping that can become so burdensome in a board game. The computer also serves as a moderator, applying all game rules impartially and allowing players to enter secret moves.

Don't expect to find gaudy graphics in **GALAXY.** What you will get is well-organized and "clean" text displays that provide all the information the gamer needs. Austere, you say? Perhaps; but fancy graphics would have been gratuitous, and I have made one concession to the arcade game freak--lots of sound effects in the form of phasers, explosions, sirens and more.

GAME MECHANICS

As the game begins, you will send fleets of ships from your home planet to explore the unknown resources of the stars. The planets circling the stars may be barren worlds, or they may possess industrial capacity and defensive ships to resist your colonization efforts. If you should succeed in conquering a neutral planet, its industrial capacity will be converted to producing new ships for your continued expansion.

GALAXY allows from 1 to 20 players to compete for control of up to 40 star systems. The computer produces a different galaxy every game.

You may play solitaire, in which case your task is to colonize the entire galaxy before game's end. In my opinion, the multi-player game is much more exciting. Your task in this game is to control the most planets at game's end. The orders which you key into the computer are invisible, so no one can tell what you are doing. This simulation of "the fog of war" makes it possible to launch surprise attacks on your opponents.

GALAXY runs in 16K of free memory. A game in progress may be saved to tape or disk.

INSIDE THE PROGRAM

This section discusses what only the programmer knows for sure--the algorithms that lie behind the code.

The computer randomly assigns industry to the neutral worlds. There is a 25% chance that a world will have no industry, and thus be economically worthless (but still strategically valuable). If a world does have industry, it is likely that it will have only a small number of industry units, usually less than five, although there is no theoretical limit to the amount of industry a neutral planet may have.

Ships are assigned to players based on a complex algorithm awarding extra ships for proximity to other players' worlds and taking away ships for proximity to neutral worlds. This tends to even things out so that, for example, there is no particular advantage to having your home world in the middle of the galaxy.

Ships are assigned to neutral worlds based on the number of industry the world has and a random factor. Neutral worlds with lots of industry can be expected to have lots of ships. Keep this in mind when scouting the neutrals.

Fleets of ships move two light-years on the turn they are released and three light-years on every turn thereafter. Distances are computed according to the Pythagorean Theorem. Thus if the destination world is 4 light-years north and 5 light-years east of the origin world, the distance is 6.40 light years, and the trip will take three years (time is rounded up).

When ships arrive at a hostile planet, combat occurs. First, each defending ship fires one shot. Then each surviving attacker fires one shot. Shots are traded until one side is eliminated. The probability that an attacker will hit its target is given by the formula,

$$P=G \quad D/(A+D)$$

where G is the gunnery factor (a random number with a mean of 0.707), D is the number of defending ships, and A is the number of attackers. A similar formula applies to the defender's fire.

A little mathematical manipulation will show that, with equal gunnery factors, you have a 50/50 chance of winning the battle if you come in with 30% more ships than the defender has. If you come in with double the number of the defender's ships, you will have an excellent chance of winning, but it will cost you a number of ships equal to the defender's force to capture the planet. To minimize your losses, come in at 5 to 1. Even at these odds, however, you still stand to lose a number of ships equal to 65% of the defender's force. It is inadvisable to attack at more than 5 to 1 odds because if an unfavorable gunnery factor should occcur (gunnery factors for attacker and defender are randomly determined at the beginning of each invasion) the victory could be Pyrrhic.

HINTS ON PLAY

Diplomacy can be an important part of multiplayer **GALAXY.** Some appropriate strategies are given below.

1. Look dumb. If you don't appear to know what is going on, the other players may ignore you, thinking that you are no threat.
2. Acquire a reputation for vindictiveness. If you let it be known that you are a badass, the timid players will be intimidated by your bluster. If you single-mindedly attack anyone who invades "your space," you will probably lose the first few games you play. However, as your rep gets better known, people will learn to leave you alone. Obviously, this strategy works only if you play with the same people regularly.
3. Establish a reputation as a loyal ally. This strategy works best if there is someone else in the game who is as trustworthy as you, and you can make that person your ally. A rep for square dealing will pay off in any other games you play with the same individuals. You will find that this idea carries over to the "real world" as well.
4. Emulate Machiavelli. If you find yourself in a game with strangers, pretend to be the loyal ally as described above. Then when the game is drawing to a close, send ships to your partners weakly defended worlds, all timed so that they arrive on the last turn of the game. I personally eschew this strategy, but its success cannot be denied.

EPILOGUE

The above notes are intended to give you some insight into the "guts" of **GALAXY** And they may provide you with enough hints to give you an edge. But the only real way to become a winner at **GALAXY** is to play it.

1 Some of my other ideas have resulted in published non-computerized games, namely **SWORDPLAY** and **THE CONQUEST OF SPACE.**

CASTLE WOLFENSTEIN:

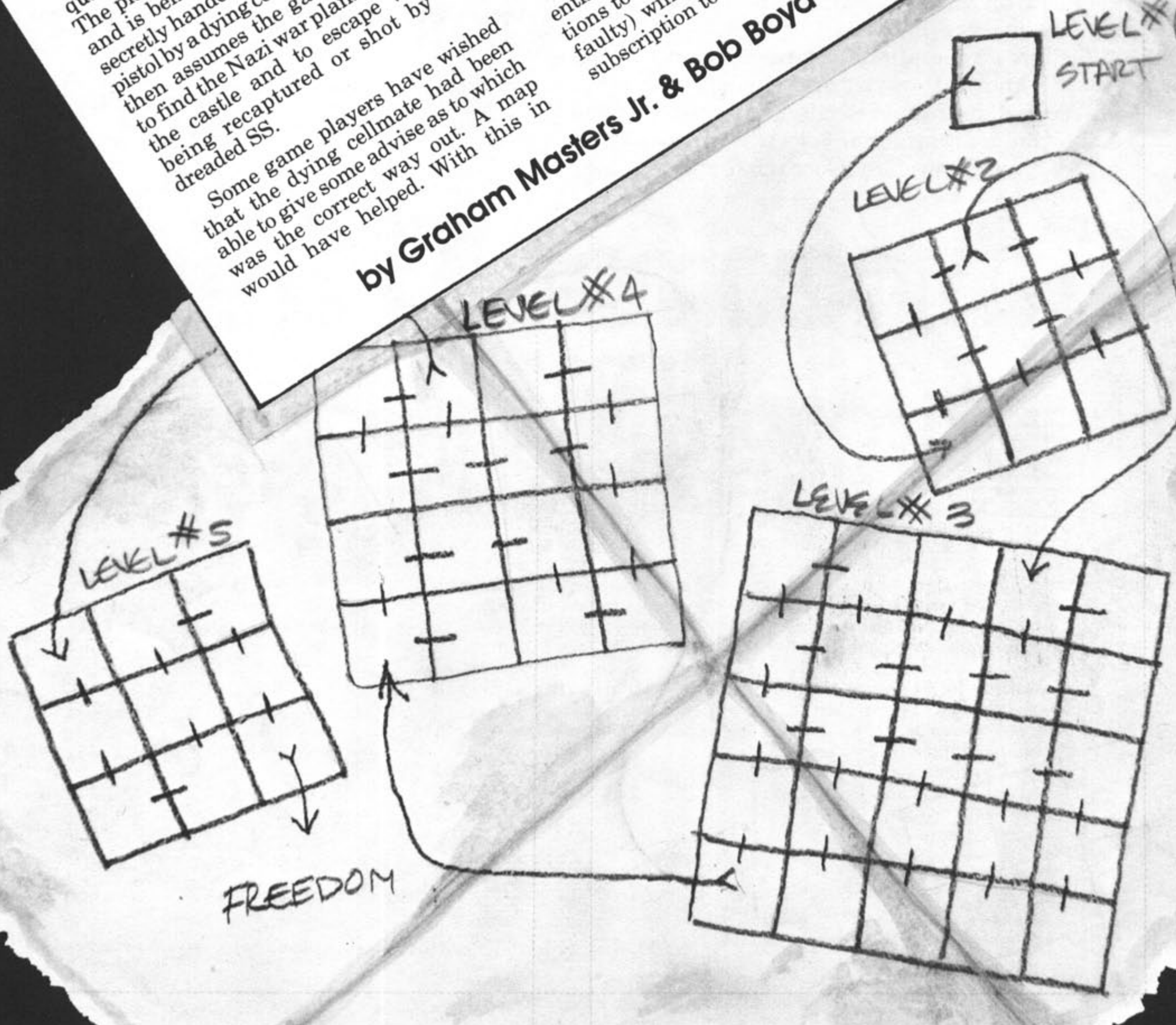
The Way Out! — Maybe!

Since it's release in the latter part of 1981 **CASTLE WOLFENSTEIN** has proven to be a very popular computer game. **CASTLE WOLFENSTEIN** is an action-adventure game which puts the player in the role of a captured Allied soldier being held by the Nazi in an Old World fortress (converted into a battlefront headquarters by the army of the Reich.) The player, who has been captured and is being held at Wolfenstein is secretly handed a fully loaded stolen pistol by a dying cellmate. The player then assumes the game challenge: to find the Nazi war plans hidden in the castle and to escape without being recaptured or shot by the dreaded SS.

Some game players have wished that the dying cellmate had been able to give some advise as to which was the correct way out. A map would have helped. With this in mind we can extend the fiction of the game in this manner: *The first guard(s) you meet are escorting another prisoner. In the ensuing shootout you kill the guard(s) but the prisoner is mortally wounded. In his last few moments he tells you how he thinks he was near the front door of the Castle when he was caught. With mind clouded in pain he describes as best as he can remember-the way out. You hastily draw a map. Now, armed with map in hand, you continue your escape. But with each room you enter you wonder "How well did this guy really remember the way?*

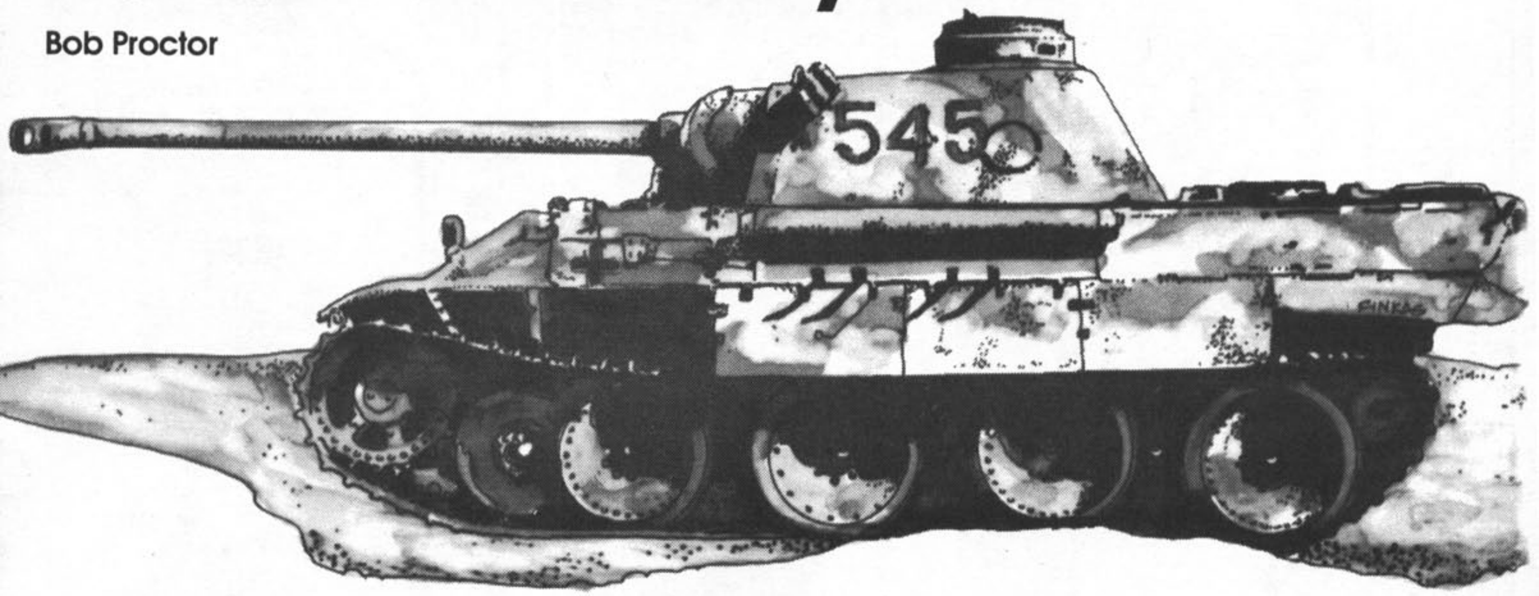
Here is the map. But is it correct? The first three readers to send in verification that the map shown is entirely correct (or send in the corrections to the map should the map be faulty) will receive a free one-year subscription to CGW.

by Graham Masters Jr. & Bob Boyd



Tanktics: Review and Analysis

Bob Proctor



Your tank has stopped amid a group of small hills; up ahead, through a thin screen of trees, you can see the east-west road down which the Russian tanks were supposed to be coming. Where are they? Sure, if they were coming this way, they'd be here by now. Could they have gotten by already? Are they about to open fire from behind? The thought of a shot "up the tailpipe" is enough to make you want to scout the territory. Before you can act, your doubts are dispelled by the appearance of a tank on the road! It's not a T-34, it's a KV-85; no wonder they weren't here sooner! Well, there's no point in waiting for a side or rear aspect shot on a KV, the armor's the same all around, so you take careful aim and fire! Good shot, it hits square on the front hull...and bounces! You slam the hatch shut and reach for another round as the return fire screams overhead...

As you can guess, **TANKTICS** is a game about armor battles between the Germans and Russians (the Eastern Front) during World War II. It is Avalon Hill's first historical microcomputer wargame since their original 4 computer games hit the market last year. Like those games, **TANKTICS** is easy to play and fairly short, but it is a much more complex simulation than **MIDWAY CAMPAIGN** or **B-1 NUCLEAR BOMBER.** It's a fairly conventional board wargame with a computer as both referee and opponent. There is no provision for two players to compete except to alternate games and compare scores. It is available on cassette at $24 for Apple II, Atari, PET and TRS-80 or on disk at $29 for the Apple and TRS-80.

IS THIS A BOARD GAME?

The first thing that catches your eye when you open the box is a brightly colored mapboard. There are two of them and they lay side-by-side to make a 16" by 18" map with forests, lakes, roads and "rough" ground. It is a purely hypothetical map, not intended to represent any real place; the idea is simply to have a relatively flat area with a few bumps, dips, and trees where the tanks can "play around." The game is played in the computer but it is impossible to visualize what is happening without refering to the map. The map is covered with a grid of hexagons (known as "hexes") and each hex is identified by "coordinates" (from A1 to FF24) clearly printed on the board. The computer tells you where things are by giving their coordinates; there are no graphics or pictures whatsoever. At first, taking the graphics off the screen and putting them on a mapboard may seem like a step backward, but there are two big advantages. First, it means owners of Commodore PET's and TRS-80's can run the game too and, secondly, we can all enjoy a larger, more complex game this way.

There are about 240 half-inch square counters to mark the positions of the tanks on the map. Each has an accurate outline of the appropriate type of tank, the movement allowance, and a letter from A to P to identify individual vehicles. German



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THE PROGRAMMER'S CORNER

For those of you who know BASIC, here are some simple improvements for TANKTICS. These changes apply specifically to the Apple version, but similar logic can be used with the others.

Our first concern is to fix the problem that occurs when a Russian and German tank occupy the same hex and it is not resolved as an overrun. If either shoots at the other, the program stops because it's trying to divide by the range which has a value of zero. The error occurs in line 20130 and it can be fixed just by adding line 20125:

```
20125 IF RG = 0 THEN RG = 1
```

Another worthwhile change will permit any number of Russian tanks (up to 16) no matter how many tanks you choose for yourself. This is done by modifying line 120 and adding line 125 so that they look like this:

```
120 PRINT "HOW MANY TANKS FOR YOU? ":: Q=8: GOSUB 10000:
    HN=Q: HL=Q
125 PRINT "HOW MANY TANKS FOR ME? ": Q=16: GOSUB 10000:
    CN=Q: CL=Q
```


Although only the speed is shown on the counter, each tank is rated for size of gun and three kinds of armor (front, side and rear). You can select from five different types of German tanks. The Panzer Mark IIIJ and IVH are inferior to every type of Soviet tank and won't get used much. The later Panzers--the Panther, Tiger and King Tiger--are all useful though you will soon learn that the Panther has reduced side and rear armor dangerously to obtain its 11 point movement allowance. There are 6 kinds of Russian tanks--2 T-34's, 2 KV's, and 2 JS's. Both sides also have Anti-Tank guns which can be used on defense; they function like tanks with a movement allowance of zero.

PLAYING THE GAME

First you select one of the 5 scenario types (see below) and choose how many tanks you will have. Then you pick the type of tanks that both sides will use. You can mix types but the computer cannot. Then the computer determines the starting positions and the location of the objective. Now you're ready to start.

The game is played in alternating turns and you always get to go first. At the start of your turn, the computer displays the positions of all of your tanks and the locations of any enemy tanks which they can see. Each turn, you can move each tank up to its maximum movement allowance unless you choose to have it shoot instead. The winner is determined by a point system which takes into account how many tanks were destroyed, how long the game took and how close to the objective the attacker got. All of this is explained in 5 pages of the 12-page rulebook, which also covers loading the program and gives some examples of play. The rulebook lists the following 5 "scenarios":

1. MEETING ENGAGEMENT - Both sides start away from the objective hex and must try to capture (occupy) it.
2. HEDGEHOG DEFENSE - You set up near the objective and must keep the Soviets from capturing it.
3. ARMOR ASSAULT - Same as #2 except that the Russians are defending and you must overrun the objective.
4. LINE DEFENSE - You set up in a line across the board (in this one case, you get to choose which hexes you will start in) and the Soviets try to break through your line to reach the objective.
5. LINE ASSAULT - The reverse of #4, with the Germans attacking a Soviet line defense.

In actual play, these are all the same game with different starting positions. In spite of the geographical "objective", victory is always determined by points and all of the scenarios continue

until one side or the other is eliminated. This gets a little strange in the case of scenario #5, where you can punch a hole in the Russian line and overrun the objective only to find that the game doesn't end until you go back and mop up every last unit.

In every game, the computer gets twice as many tanks as you do. This gives scenarios 2 and 4 an authentic feel; the Russian "hordes" attempt to swamp the defenders by weight of numbers. You have an advantage being on defense because you can sit and shoot while the attacker cannot both move and return your fire. When YOU must attack it's a tough row to hoe--you must give yourself very good tanks and the Russians weak ones if you want a reasonable chance of winning.

WINNING THE GAME

The scoring system makes zero points a tie game. Any plus score is a win for you, a minus score is a loss. It is possible to capture your objective and still lose; it is even possible to wipe out the Russians and lose. You can't predict how many points a tank will be worth--anywhere from 10 to over a hundred! In any given game, though, each kill will be worth more than the last. This makes the last tank worth quite a bit and tremendous come-backs are common.

You lose 3 points per turn, so accomplishing the same result in less time means a higher score. The importance of time-pressure varies with the number of tanks. Ten turns (30 points) represents a much bigger percentage of the total score in a 2-tank game than it does in an 8-tank game.

Both sides also score points for each hex they move toward the objective. Consider the difference between scenarios #1 and #2. In #2, your tanks begin in position around the objective; you just find good protective terrain and wait for the Russians to show. The further away they start, the longer it takes and the more points they have by the time you spot them. In scenario #1, you start away from the objective too, and get points for your approach to offset some of those the Russians are getting. On the minus side, you don't know who was further away, who will get there first, or whether the two forces will meet "in route." The bottom line: #1 is more exciting and unpredictable, and not any harder to win.

A total disaster for you will often mean less points for the computer (because you lose fewer points on time and the Soviets don't get as close to the objective) than if you had lost a longer game. This makes "head-to-head" competition with a friend a bit frustrating but you can still accumulate points over many games to make a "campaign" game. One way I do this is to start with 8 tanks and play each of the scenarios starting with 5 and working backwards. In each new scenario, give yourself only the tanks that survived the previous round. Surviving all 5 rounds is proof that you have mastered the game.

THE COMPUTER AS OPPONENT

How good an opponent is the computer? The rulebook claims that it will make "very few stupid moves" but I've seen it move tanks backwards several times. It also gives up side and rear aspect shots more often than it should but does use protective terrain pretty well. You'll find it difficult to win at first, but as your tactical skill improves you'll begin winning regularly. At this point, it's time to start giving yourself poorer tanks.

SOME COMPLAINTS

The Apple version of **TANKTICS,** which I was using, suffers a little from program errors. This is not the problem it might be thanks to Avalon Hill's policy of selling programs that can be changed (see the programmer's corner), however I feel uncomfortable with a product that doesn't seem finished. Fortunately, the Apple version seems to be the only one with problems.

My only compaint about the game system itself concerns lines of sight. **TANKTICS** handles sightings as probabilities. Beyond adjacent hexes, sighting is never certain, it is likely or unlikely. It takes a while to get used to seeing "through" hills and forests, but I can visualize very low, rough ground and thin forests and live with it. It certainly makes programming easier. The problem is that the game has no memory of previous results. Thus it sometimes happens that you can see a tank on one turn but can't see it on the next, even though it continues to fire at you!

CONCLUSIONS

There are two types of people who might be disappointed with **TANKTICS.** The first is someone who buys it wanting an arcade-style game; this it obviously is not and was never intended to be. The second is the serious wargamer who expects the computerized equivalent of **PANZER** or **SQUAD LEADER.** This game has neither the complexity nor feel of these board games. In some areas (like combat resolution) it comes close, but in other ways (lines of sight) it's much simpler. You don't have the sense of control that you do in a board game; average luck on an unlikely shot and poor luck on a likely shot all come out the same: a miss! You can't tell the difference and if you can't shrug that off, **TANKTICS** may irritate you. For those of us who enjoy a little uncertainty and for all you readers who now know what to expect, **TANKTICS** is just plain FUN! know why things are happening.

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ATARI ARCADE

by John Anderson

When the **ATARI** first appeared in the marketplace, lack of software was cited as a major disadvantage. Since that time, a veritable software explosion has taken place. Dozens of quality programs from third party manufacturers have surfaced as the expansion of Atari shelf space in local computer stores attests to this fact.

The **ATARI** Software Exchange, offering programs such as in-house genius Chris Crawford's **EASTERN FRONT,** has added to this growth. And now, first rate graphics, of a kind formally attainable only by **ATARI** programmers themselves, have reached the marketplace.

Let's look at three excellent examples of quality third party game graphics, from three separate sources! **JAWBREAKER,** from On-Line Systems, **GALACTIC CHASE,** by Stedek Software, and **PROTECTOR,** from Crystal Computer and Software.

Please don't be misled by the name **JAWBREAKER.** This is the arcade game known most commonly as **"PAC—MAN"(R),** though there are a couple of amusing and original alterations. You are a roving mouth with a voracious appetite, gobbling up all the candy in sight. You are pursued just as voraciously by a group of multicolored smiles, whom, you may incorrectly surmise, want only to wish you a nice day. Nothing of the sort. What they really want to do is corner you in the maze so they can knock your teeth out. I never did really trust people who say "have a nice day."

In respect to the "theme" of this package, I think it holds together better than even the arcade game itself. If you succeed in clearing a board, a manic toothbrush shoots across the screen for a quick going over before the next session. Even the instructions reflect some wit and humor. This is not merely an arcade game transplant.

As for the graphics and sound, when I first saw the program, I could not bring myself to believe the game was not written by **ATARI.** It is not only truly addictive, but also "paced"--that is, you get tougher, the enemy gets tougher, Four stars to this one.

Finally getting a little weary of Invaders? Try **GALACTIC CHASE** on for size. I'd wager the author would have called this program **"GALAXIAN" (R)** if the name hadn't already been "coined." For those of you who save your quarters for the laundry, Galaxian is Invaders with a slight twist--every so often a formation breaks off the pack to snuff you out. Graphics and sound are superlative, addictive qualities strong, and a frighteningly difficult advanced level awaits survivors. Also excellently paced, the insectoid aliens are deliciously hateful.

The real moments in this game come when you are attacked by formations on all sides--four, six, or more aliens bent on bombing or ramming you out of existence. The novice will not survive an assault like this. However, with much practice, you can learn to "spear" the enemy, vaporizing them on the nosecone of your ship. This calls for nimble steering, needless to say, and all the while you must fire at your other attackers.

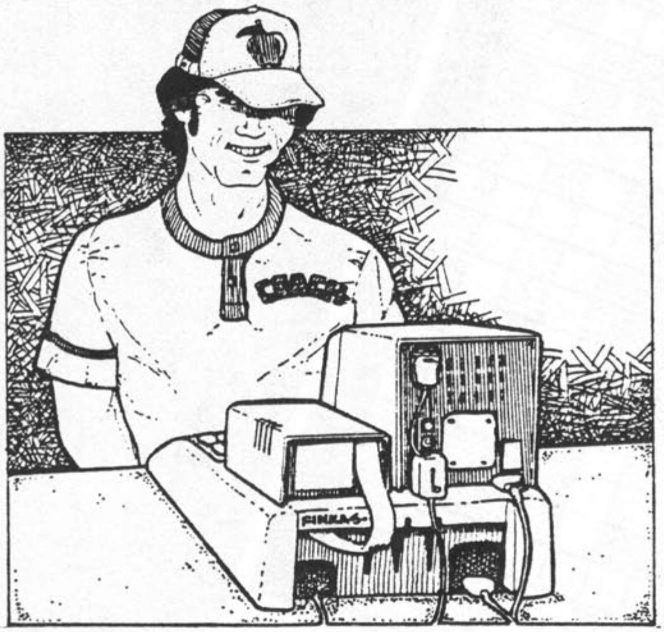
Perhaps the most ambitious game of the pack is **PROTECTOR**, from Crystal Software. Though the game is somewhat flawed, it shows great potential.

The game is akin to the arcade game **"DEFENDER"(R).** Your job is to save the last survivors of a lost city before they are tractor beamed into a volcano by an alien ship. This game makes use of the Atari's horizontal scrolling ability. As you fly east or west, the terrain scrolls by giving the exciting illusion of a "microworld." Atari's extraordinary capabilities in this area are sure to be exploited further in the future.

The game is very difficult at first, and on that account, is relatively addictive. Also, the scrolling terrain is fun to survey. Why then, is the game ultimately somewhat disappointing? First of all, it's got a number of quirky bugs in it--bugs that do not surface right away. A promised meteor storm

Continued on page 36

THE GREATEST BASEBALL TEAM OF ALL TIME TOURNAMENT (PART 2)



In our last issue (Nov. — Dec. 1981) the staff at CGW proposed a baseball tournament to determine the greatest baseball team of all time. Using Avalon Hill's **MAJOR LEAGUE BASEBALL** or Strategic Simulation's **COMPUTER BASEBALL** you can set up a tournament which includes the premier teams in baseball history. The statistics for the first four teams of the tournament (1927 Yankees, 1931 Athletics, 1948 Indians, and 1961 Yankees) were included in our last issue. The statistics for the remaining four teams are included in this issue. The winner of the upper bracket (last issue) should play the winner of the lower bracket (this issue) in a best of seven series to determine the overall winner of the GBTOAT tournament. To guarantee that the results of your replay are included in CGW your tournament results should be in our hands by MARCH 31, 1982 (PLEASE NOTE THAT THIS DEADLINE IS CHANGED FROM THE ORIGINAL). The results of the tournament will be published in our May - June 1982 issue (not the Mar.-Apr. 1982 issue indicated in our last issue). Important ground rules for the tournament can be found in the Nov. - Dec. 1981 issue.

55 DODGERS
36 YANKEES
34 CARDINALS
76 REDS

1955 BROOKLYN DODGERS

Name	Pos.	B	G	AB	R	H	2B	3B	HR	RBI	BB	SO	SB	BA	FA
G. Hodges	1B	R	150	546	75	158	24	5	27	102	80	91	2	.289	.991
J. Gilliam	2B	S	147	538	110	134	20	8	7	40	70	37	15	.249	.968
P. Reese	SS	R	145	553	99	156	29	4	10	61	78	60	8	.282	.965
J. Robinson	3B	R	105	317	51	81	6	2	8	36	61	18	12	.256	.966
C. Furillo	RF	R	140	523	83	164	24	3	26	95	43	43	4	.314	.981
D. Snider	CF	L	148	538	126	166	34	6	42	136	104	87	9	.309	.989
S. Amoros	LF	L	119	388	59	96	16	7	10	51	55	45	10	.247	.972
R. Campanella	C	R	123	446	81	142	20	1	32	107	56	41	2	.318	.992
D. Hoak	3B	R	94	279	50	67	13	3	5	19	46	50	9	.240	.960
D. Zimmer	IF	R	88	240	38	67	10	1	15	50	19	66	5	.239	.969
R. Walker	C	L	48	103	6	26	5	0	2	13	15	11	1	.252	
D. Newcombe	P	L	57	117	18	42	9	1	7	23	6	18	1	.359	.907

Pitchers	THR	W	L	G	GS	CG	IP	H	BB	K	ERA
D. Newcombe	R	20	5	34	31	17	234	222	38	143	3.19
C. Labine	R	13	5	60	8	1	144	121	55	67	3.25
C. Erskine	R	11	8	31	29	7	195	185	64	84	3.78
B. Loes	R	10	4	22	19	6	128	116	46	85	3.59
J. Podres	L	9	10	27	24	5	159	160	57	114	3.96
D. Bessent	R	8	1	24	2	1	63	51	21	29	2.71
K. Spooner	L	8	6	29	14	2	99	79	41	78	3.64

1936 NEW YORK YANKEES

Name	Pos.	B	G	AB	R	H	2B	3B	HR	RBI	BB	SO	SB	BA	FA
L. Gehrig	1B	L	155	579	167	205	37	3	49	152	130	46	3	.354	.994
T. Lazzeri	2B	R	150	537	82	154	29	6	14	109	97	65	8	.287	.968
F. Crosetti	SS	R	151	632	137	182	35	7	15	78	90	83	18	.288	.948
R. Rolfe	3B	L	135	568	116	181	39	15	10	70	68	38	3	.319	.957
G. Selkirk	RF	L	137	493	93	152	28	9	18	107	94	60	13	.308	.974
J. Powell	CF	R	87	324	62	99	13	3	7	48	33	30	16	.306	.976
J. DiMaggio	LF	R	138	637	132	206	44	15	29	125	24	39	4	.323	.978
B. Dickey	C	L	112	423	99	153	26	8	22	107	46	16	0	.362	.976
M. Hoag	OF	R	45	156	23	47	9	4	3	34	7	16	3	.301	.955
B. Chapman	OF	R	36	139	19	37	14	3	1	21	15	20	1	.266	.965
J. Glenn	C	R	44	129	21	35	7	0	1	20	20	10	1	.271	.970
R. Ruffing	P	R	53	127	14	37	5	0	5	22	11	12	0	.291	.986

Pitchers	THR	W	L	G	GS	CG	IP	H	BB	K	ERA
R. Ruffing	R	20	12	33	33	25	271	274	90	102	3.85
M. Pearson	R	19	7	33	31	15	223	191	135	118	3.71
B. Hadley	R	14	4	31	17	8	174	194	89	74	4.34
L. Gomez	L	13	7	31	30	10	189	184	122	105	4.38
J. Broaca	R	12	7	37	27	12	206	235	66	84	4.24
P. Malone	R	12	4	35	9	5	135	144	60	72	3.80
J. Murphy	R	9	3	27	5	2	88	90	36	34	3.38

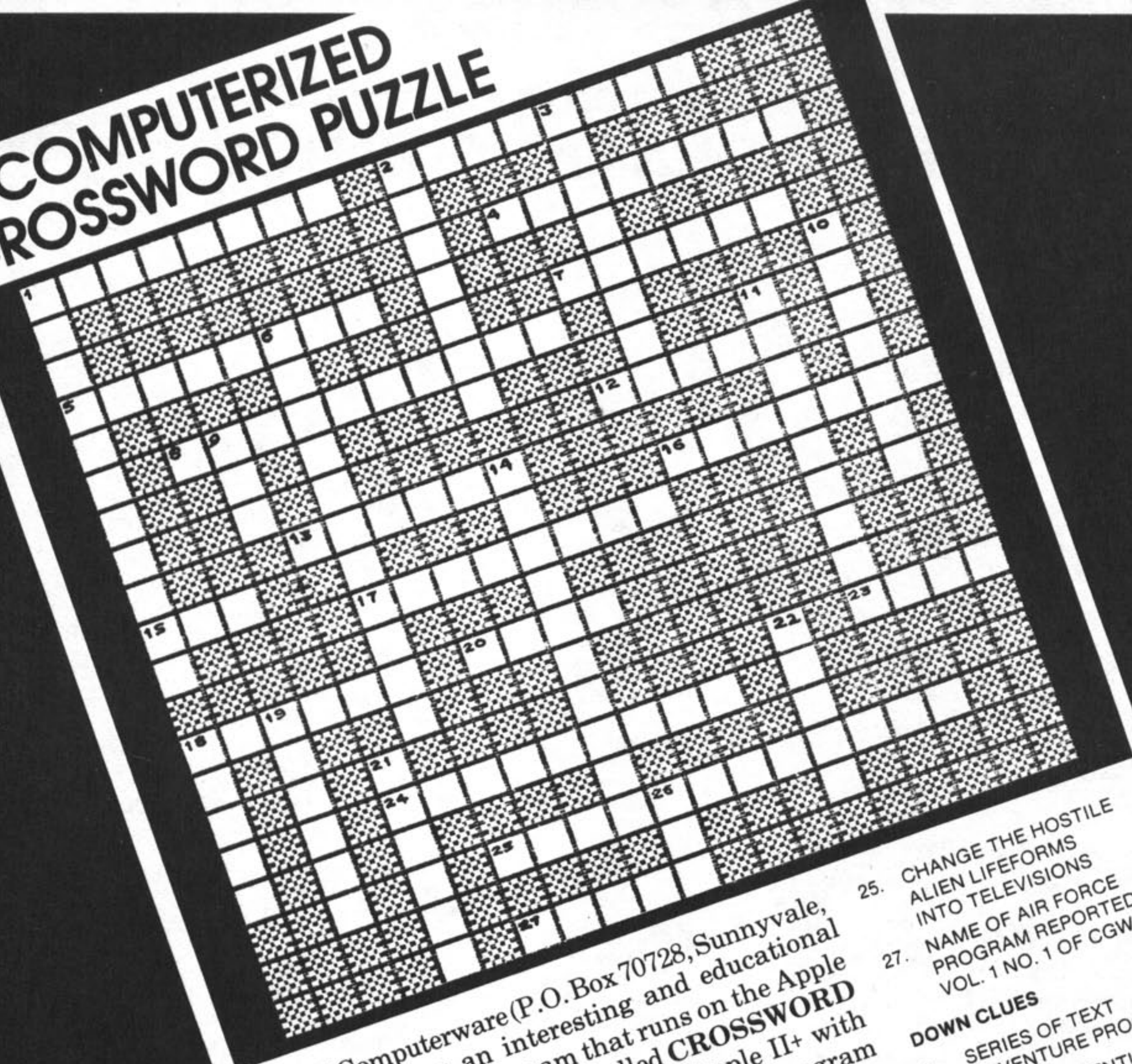
1934 ST. LOUIS CARDINALS

Name	Pos.	B	G	AB	R	H	2B	3B	HR	RBI	BB	SO	SB	BA	FA
R. Collins	1B	S	154	600	116	200	40	12	35	128	57	50	2	.333	.991
F. Frisch	2B	S	140	550	74	168	30	6	3	75	45	10	11	.305	.977
L. Durocher	SS	S	146	500	62	130	26	5	3	70	33	40	2	.260	.957
P. Martin	3B	R	110	454	76	131	25	11	5	49	32	41	23	.289	.936
J. Rothrock	RF	S	154	647	106	184	35	3	11	72	49	56	10	.284	.975
E. Orsatti	CF	L	105	337	39	101	14	4	0	31	27	31	6	.300	.986
J. Medwick	LF	R	149	620	110	198	40	18	18	106	21	83	3	.319	.960
S. Davis	C	R	107	347	45	104	22	4	9	65	34	27	0	.300	.988
B. Whitehead	IF	R	100	332	55	92	13	5	1	24	12	19	5	.277	.959
B. DeLancey	C	L	93	253	41	80	18	3	13	40	41	37	1	.316	.980
C Fullis	OF	R	69	199	21	52	9	1	0	26	14	11	4	.261	.969
P. Crawford	IF	L	61	70	3	19	2	0	0	16	5	3	0	.271	
B. Mills	OF	R	29	72	7	17	4	1	1	8	4	11	0	.236	

Pitchers	THR	W	L	G	GS	CG	IP	H	BB	K	ERA
D Dean	R	30	7	50	33	24	312	288	75	195	2.65
P. Dean	R	19	11	39	26	16	233	225	52	150	3.44
T. Carleton	R	16	11	40	31	16	241	260	52	103	4.26
B. Walker	L	12	4	24	19	10	153	160	66	76	3.12
B. Hallahan	L	8	12	32	26	10	163	195	66	70	4.25
J. Haines	L	2	4	32	7	1	82	114	49	27	5.49
D. Vance	R	1	1	19	4	1	59	62	14	33	3.66

Continued on page 36

A COMPUTERIZED CROSSWORD PUZZLE



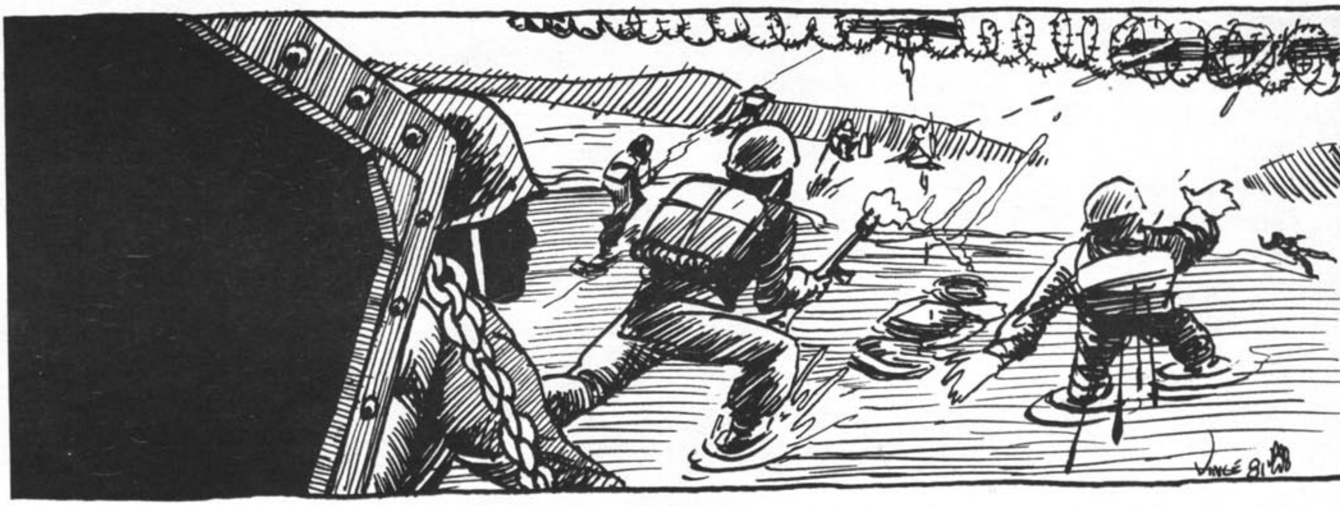
L&G Computerware (P.O. Box 70728, Sunnyvale, Ca., 94086) has an interesting and educational crossword puzzle program that runs on the Apple II computer. The program, called **CROSSWORD MAGIC,** requires an Apple II or Apple II+ with 48K of memory. To make full use of the program you also need one of the following printers: Apple Silentype; Epson MX-80 with "Graftrax" update; MX-100; Nec PC-8023; IDS Paper Tiger 440G, 445G, 560S. The two disk program, which retails for $49.95, allows you to create a crossword puzzle then save, play, or print a hardcopy of your creation. The staff at COMPUTER GAMING WORLD like **CROSSWORD MAGIC** and have prepared the following puzzle from the program for your enjoyment. Answers are on page 36.

ACROSS CLUES

1. EARLY SCIENCE FICTION GAME
2. EMPIRE OF THE ________
4. PLANET FROM WHICH YOU ESCAPE (SYNERGISTIC)
5. TOURNAMENT IN THIS MAGAZINE
7. WHAT FIGHTS IN THE SNOW?
8. STOCKMARKET GAME
12. COMPUTER GAMING ________
13. SOFTWARE COMPANY
15. INITIALS FOR COMPUTER GAME COMPANY
16. AVALON HILL GAME
17. "PANZERBLITZ" ON COMPUTER
18. WON 1981 CHARLES ROBERTS AWARD FOR BEST COMPUTER GAME
20. DETAILED TEXT ADVENTURE GAME
23. AUTOMATED SIMULATIONS GAME LINE
24. POPULAR ARCADE GAME
25. CHANGE THE HOSTILE ALIEN LIFEFORMS INTO TELEVISIONS
27. NAME OF AIR FORCE PROGRAM REPORTED IN VOL. 1 NO. 1 OF CGW

DOWN CLUES

1. SERIES OF TEXT ADVENTURE PROGRAMS
2. HI-RES ADVENTURE GAME
3. A FEATURE CREATURE FROM CRUSH, CRUMBLE AND CHOMP!
6. CASTLE YOU MUST ESCAPE FROM
9. MISSILE COMMAND TYPE GAME
10. THE AD SAID YOU COULD SINK THIS WITH YOUR APPLE
11. TWO WORD TEXT GAME
14. SHIP YOU COMMAND IN EARLY SCIENCE FICTION GAME
18. NAME OF A POPULAR PERSONAL COMPUTER
19. NAME OF A COMPUTER CHESS PROGRAM
21. NEW AVALON HILL GAME
22. 400 AND 800
26. FIRST 3 INITIALS OF A POPULAR PERSONAL COMPUTER



Operation Apocalypse: A Review and Campaign Scenario

by Paul Todd and Russell Sipe

OPERATION APOCALYPSE is the second game Strategic Simulations has put out by Rodger Keating, REBEL FORCE (hereafter RF) being his first. The game simulates in an abstract fashion four engagements between the Germans and Americans in World War II. Operation Market-Garden (the Allied attempt to breach the Siegfried Line through a combined airborne and regular infantry assault) is represented by two scenarios, one being similar to the air drop at Arnhem and the other being similar to XXX Corps advance up the highway. There is an invasion scenario and a scenario that is a general advance to contact situation with the winner holding the most towns.

When I say the simulation is abstract I only mean that historic references like unit designations and town names are not involved. The actual tactical feel is very realistic. This game has it all: off board artillery, bunkers, landing craft, engineers (they even build bridges), hidden units, infantry river assault, pseudo-random terrain set up, paratroop drops, panic movement, night turns, flak and anti-tank units and beautiful hi-res graphics.

The physical components are standard SSI quality. You get two plastic covered player aid cards with a blank map board, turn record chart, command quick reference chart, and unit mode chart. You also get a scenario selection card with reinforcement schedule and victory conditions for each of the four scenarios. Also included is a very well written rule book and four felt tip pens.

The program itself is great! It handles everything. You cannot make an illegal move. All the combat and movement modifiers are calculated in the blink of an eye (no speed problems with this one like COMPUTER AMBUSH). For combat modifiers the computer factors in terrain (for attacker and defender), unit type and mode, and adjacent friendly and enemy units. If after combat a unit still has movement points left it can continue to move. Movement points are subtracted for enemy zones of control (less is subtracted at night). The program even has reinforcements arriving pseudo-randomly and calculates the victory conditions at the end of the scenario. You can play all the scenarios for many turns after they are officially over if you want.

The map contains six types of terrain as well as rivers, all in color. The units are black and white which causes some difficulty in unit identification but facing is different for both sides so with a little practice there isn't much problem. Unlike RF you can see the terrain under any unit at the stroke of a key. Another significant improvement over RF is the ability, through the use of a pause function, to leave a unit temporarily in order to move another unit out of the way.

The use of unit modes is another improvement on the RF system. Units can be in one of six modes: attack, normal, transport, reorganization, defense, river (infantry), fire (tanks), or bridge building (engineers). Each mode has it's special effects on movement and combat, which the computer keeps track of (and you better too if you want to win). The different modes, especially reorganization, forces you to direct your army in an historically correct manner. (I lost several units to off-board artillery by reorganizing too close to the front).

OPERATION APOCALYPSE is a two player game. But if you can't find someone with which to play, the computer plays a good game. There are no less than four levels of solitaire play. The computer can even play both sides. The game contains sufficient tactical problems and complexity to give it a realistic feel.

OPERATION APOCALYPSE runs on an Apple II computer (48K with Applesoft in ROM0. $59.95.

by P.T.

The four scenarios of OPERATION APOCALYPSE can be linked together in a semi-historical order to create an interesting campaign for two players or a player versus the computer.

The campaign involves playing the four scenarios of OPERATION APOCALYPSE in the following order: Invasion represents D-Day; Bridgehead represents Operation Market; Highway represents Operation Garden; and Advance To Contact represents a general engagement in a valley somewhere in France or Germany.

It is possible that the campaign will not require all four scenarios to determine a winner. The campaign can be shortened by either player based on the results of the battles actually fought.

The first scenario, Invasion, is critical to the whole campaign, just as the events of D-Day and Operation Overlord were critical to any future campaign in France. If the German player scores a Decisive Victory in the first scenario the campaign is immediately concluded with a GERMAN STRATEGIC VICTORY. If the Allies score a decisive victory then the second and third scenario, Advance to Contact, is played. Points are awarded the victor of a scenario according to the Scenario Point Table. After playing the scenarios and adding up the points consult the Campaign Victory Table to determine the overall results.

by R.S.

SCENARIO POINT TABLE

	Allied Decisive Victory	Allied Substative Victory	Allied Marginal Victory	German Marginal Victory	German Substative Victory	German Decisive Victory
1. Invasion	+4	+3	+1	-1	-3	-6
2. Bridgehead	Any Allied Victory +3			Any German Victory -2		
3. Highway	+4	+2	+1	-1	-2	-3
4. Advance	+3	+2	+1	-1	-2	-3

CAMPAIGN VICTORY TABLE

POINT TOTAL	CAMPAIGN RESULT	
+6	Allied Superior Victory:	Allies win war in Dec. 44
+5 to +3	Allied Strategic Victory:	Allies win war in May 45
+2 to +1	Allied Victory:	Allies win war in Dec. 45
0	European Campaign Fails	
-1 to -2	German Victory:	Peace with Germany intact
-3 to -5	German Strategic Victory:	Operation Sea Lion Revived
-6 less	German Superior Victory:	Germans win the war

MICRO - REVIEWS

HOW TO MASTER THE VIDEO GAMES

HOW TO MASTER THE VIDEO GAMES is a 177-page book that bills itself as the first complete guide to the 30 most popular coin-operated arcade games. The book, written by Tom Hirschfeld, is published in paperback by Bantam Books ($2.95).

After a couple of short introductory chapters Hirschfeld lists "Seven Steps to Mastery" of the games. They are: 1) Reconnaissance; 2) Teamwork; 3) Concentration; 4) Tempo; 5) Observation; 6) Experimentation; and 7) Memorization. The first step is obvious but often unheeded, observe the game being played several times before playing it yourself. You can learn a lot faster and a lot less expensively by watching others. ED. NOTE — Mr. Hirschfeld's first point is well taken. However please do your reconnaissance with style . Don't crowd a stranger to watch the game. Some players resent close quarter observation of their play. Use good sense and common courtesy while performing your reconnaissance. By Teamwork, the second step, the author simply means that players should share their ideas with one another. The other steps are apparent. Following the chapters on the games themselves, Hirschfeld even has a chapter on exercises for the video-gamer (hands, eyes, and fingers).

The games themselves are divided into five catagories: Space Invaders-Type Games; Asteroids-Type Games; Maze Games; Reflex Games; and Miscellaneous Games. The Space-Invader-Types include Astro Blaster, Astro Fighter, Centipede, Galaxian, Gorf, Moon Cresta, Phoenix, Pleiades, Space Invaders and Space Invaders Part II. The Asteroids-Types include Asteroids, Aster-

oids Deluxe, Defender, Scramble, Space Fury, Space Odyssey, and Star Castle. Maze Games include Armor Attack, Berzerk, Pac-Man, Rally-X, Targ, Venture and Wizard of Wor. There are three games in the Reflex catagory: Monaco GP, Sky Raider and Space Zap. The Miscellaneous category also has three games: Battlezone, Crazy Climber and Missile Command.

The book is just the ticket for the game player who wants to be more than a novice. If you really want to enjoy the coin-operated arcades take a few of those spare quarters and pick up HOW TO MASTER THE VIDEO GAMES, you'll come out ahead in the long run.

Stanley Greenlaw

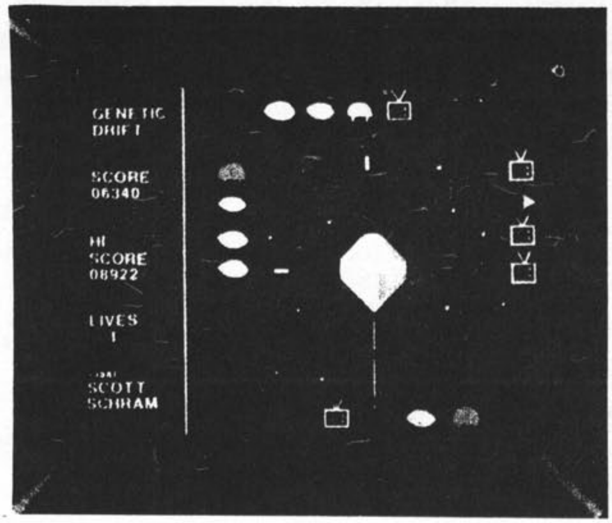
WEBSTER'S MICROCOMPUTER BUYER'S GUIDE

Although most of us don't often buy $25.00 books, here's one that you might find interesting. **Webster's Microcomputer Buyer's Guide** is over 300 pages of industry information. An evening with this book and you'll be an instant authority. The book documents almost every foreign and domestic manufacturer and is also a primer on programming languages, memory storage systems, software, microprocessors, communications networks and many other related products. All very well done and interesting reading.

Chapter 1. Introduction Microcomputers and Systems.
Chapter 2. Peripheral Devices for Microcomputers.
Chapter 3. Introduction to Microcomputer Software.
Chapter 4. A Summary of the Basic Language.
Chapter 5. The Big Future for Desktop Personal Computers.
Chapter 6. Guidelines for Selection of Microcomputers.
Chapter 7. Microcomputers and Word Processing.
Chapter 8. Future Trends in Microprocessing.
Chapter 9. Communications and Networking with Computers.
Chapter 10. Microcomputers in Education.
Chapter 11. Independent Z80 & 8080 Based Software Products.
Chapter 12. Independent TRS-80 Software Products.
Chapter 13. Independent Apple Computer Software Products.
Chapter 14. Independent Commodore Software Products.
Chapter 15. Independent Motorola 68XX Software Products.
Chapter 16. Microcobol for Microcomputers.

The book's only shortcoming is that some of the information is already out of date. The industry is just changing too fast. For example, the new IBM personal computer is not included. But if you want or need a rapid education about the microcomputer industry, this book will help you at least know the right questions to ask. That in itself could be worth a great deal.

Gene Allen



GENETIC DRIFT

GENETIC DRIFT has an original if not realistic theme. At the center of the monitor surrounded by drifting mutated life forms, your mission is to turn them into friendly life forms. Since TV is such an important part of our lives, the friendly life forms are represented by TV sets--shades of "My Favorite Martian" reruns.

At the start of the game you are surrounded by sixteen mutants; four in each of the cardinal directions. As the mutant life forms drift from side to side they sling genetic garbage at you. Three hits with that junk and you're gone. To defend yourself, and your precious genes, you have a diamond-shaped turret from which you fire your mutation gun in an effort to change the unfriendly forms into friendly ones. The mutants floating around you at the start of the game are about midway through the evolution cycle. If you succeed in turning all four mutant forms on the same side of the screen into friendly TV forms you will begin to be bombarded with hearts. Don't shoot these symbols of good will as hitting a heart will in most cases cause the forms sending the heart to destabilize into a form more alien than the original. From time to time a group of friendly life forms will send their heart upside-down. These must be shot to invert the heart or the whole side destablizes.

If you succeed in turning all sixteen mutants into friendly forms, the High Mutant (an oversized TV set) congratulates you by sweeping the board clean of mutants. Then follows the next round which, of course is more deadly than the last.

Avoid going on a shooting spree. This game is not for the over-zealous slash-and-hack player. You can't shoot wildly at anything that moves for you might hit your friends, the TV sets, who will be destabilized and revert to the lowest life form.

Starting at Level 3, as if you didn't have enough

problems, radioactive hunks of critical mass will begin whirling around you. These must be destroyed quickly as they are closer to you than the mutants, you might not see their missiles until it is too late.

Level four has the critical mass still present, but now when you shoot them, they evolve. They mutate into things such as diamonds, spheres, and fiendishly grinning happy faces. As for what's beyond Level 4, your guess is as good as mine. I cannot imagine anyone getting so far except someone who is a mutant himself.

This is not a game for the pondering thoughtful player. I would recommend this game to arcade addicts only. The game can become extremely angering especially when you've got all but one form turned into a TV set and while waiting for it to come back into range you notice the heart peacefully drifting toward you from the rear is UPSIDE DOWN. Quickly you lunge at the keyboard. Too late. "Well, I didn't care about seeing the next level anyhow. I don't know why I play this infuriating game. I could be doing more productive things with my life" you say, as you reach for the return key to start a new game. **GENETIC DRIFT** is definitely habit forming! definitely exciting! definitely fun!

GENETIC DRIFT by Broderbund Software, runs on the Apple II computer with 48K in RAM. The price is $29.95.

Bob Boyd



RED ALERT

Flee for the hills! Here come the bareboned thudputters! Can you imagine. Educated adults staying up all night to blast thudputters and space meanies? Of course you can, because you've probably spent a night or two blasting one alien-type or another yourself. Well, here's another in the long line of aliens-dropping-from-the-skies-being destroyed-by-your-weapons games. While many versions of the ADFTSBDBYW type of game are very similar to the coin arcade games that they were based upon, this one has a flavor all it's own. The difference lies in the fact that you have a variety of weapons at your disposal rather than the ubiquitous missile firing ship. Your weapons include two multi-barreled precision cambered meanie blasters, one ultra-sensitive wide-range multi-frequency redar, one government surplus anti-thud rocket, and one Van Apple Rediation (sic) Belt repair kit.

Play involves blasting the invaders before their bombs strike your defensive installations. One of your strategies, therefore, should be to be selective about which bases you protect. If you lose your radar your blasters become less effective. If you lose your missile launcher you can't fire your rocket which will wipe out all the aliens on the screen. If you lose your Van Apple Rediation Belt repair kit you won't get a new Belt of protection every few thousand points. And if you lose both blasters the game is over. It is very difficult to defend all of these and remember, to defend everything is to defend nothing. Try covering the center and one blaster as the loss of one blaster will not greatly effect the game.

IT IS HIGHLY RECOMMENDED THAT YOU USE A JOYSTICK TO PLAY THIS GAME. The rules proclaim that those who play the game with paddles are "brazen" (i.e. marked by contemptuous boldness). Even with the joystick **RED ALERT** requires the reflexes of a seasoned arcade player.

A good game for arcade players, **RED ALERT** runs on the Apple II computer with 48K in Integer basic.

Luther Shaw

WALL STREET

WALL STREET, by CE Software, is a stock market game using the stock market as it's vehicle. In the designer's notes section of it's rulebook Donald Brown, the author, says "Any similarities between it (**WALL STREET**) and real life are largely coincidental". While written with tongue in cheek the statement is, none the less, true. **WALL STREET** isn't much of a simulation of the stock market; rather it can better be described as a game which uses the stock market as it's vehicle.

The game involves buying and selling of stocks on a simulated stock market made up of thirty stocks. The stocks are divided up into six areas: computer, entertainment, oil, automotive, retail, and appliance. The names of real companies are used. For example the computer stocks are Apple,

Tandy, IBM, DEC, and another of the gigantic computer megacorporations, CE Software.

Most traditional stock market games are built around buying on margin or on selling short. **WALL STREET** uses the latter approach. Selling short involves selling stock that you don't own. They really do that on Wall Street folks! The trick in "selling short" is to sell the stock when it is high and deliver the stock when it is low. What the player is doing is trying to make money on a stock that he feels is going down in value.

Another important element in the game is the buying of information. There are five levels of information gathering. Each level is five times more expensive than the previous level and increases your chance of getting secret market information by 10%. The highest level gives a 50% chance of picking up information and costs $6,250 per week. The next lower level is 40% but the cost is only $1,250 per week. Is the 10% increase in chance of getting information worth a five fold increase in cost? Most of those with whom I have played the game think not. The 40% level is the most popular level.

After playing the game several times I believe that the program sets up patterns for certain stocks. I am somewhat tentative in this statement because of the fact that if the pattern exists,they are subtle. For example, in a recent game we noted that one particular oil stock seemed to lag one day behind the others in type of action. If the other four changed from an up day to a down day the stock in question would make the same change only do it a day later. If you find any patterns in the game please drop a note to CGW. I'd like to read about it.

One of the best features of the game is the ability to list the day's stock quotes on a printer. This has two advantages over viewing the quotes on a CRT. First, you must flip through several "pages" of the daily report to see all the stocks on a CRT. Second, hard copy allows you to get a history on a stock.

WALL STREET, by CE Software, runs on the Apple II Computer with 48K and Applesoft in ROM.

Daniel Hockman

CARTELS & CUTTHROATS

SSI's Cartels & Cutthroats presents to the computer gamer a well executed economic simulation. The premise of this game is that you (and your fellow players) own companies which produce some item or commodity. The exact item is not specified.

During set-up the computer will randomly generate a scenario or allow you to choose your own. Scenarios include the following variables: type of product (necessity, luxury, or mixed), costs of raw material (fluctuating seasonally or randomly, or based on the demand in your game), inflation (low, controlled, high or runaway), economic rate (from slow decline to strong expansion), and there even exists a chance of an economic swing, up or down. All together these variables do provide a wide variety of possible game backgrounds and situations against which you may compete in the marketplace. The market simulations seem quite good although even the manual admits that beyond 40 quarters the economic simulation begins to break down.

Among the program features are several one shot bits of chrome that become tedious upon the third or fourth repetition, such as a moving high-res graphics interlude that must slow processing of the turn, and the programmer's version of witty sayings that soon repeat. These combined with the rendition of "We're In the Money" at program start leave one with the impression of a glossy version of Lemonade Stand, which is unfortunate.

The most refreshing feature is the ability to play a hard-copy game. I believe this to be the most convenient way to play, allowing everyone to view his reports of which there are many. This reviewer does so much work with terminals that my eyes begin to cross, especially with the low quality of most Apple monitors (i.e. T.V. sets). Thus a hard-copy of the reports is most pleasant. This feature also makes the program ideally suited to use by high school instructors, in courses in micro-economics, who wish to set up class participation. The program also allows the use of paddles to page through the reports but most will find this of little real benefit.

There are many random events to make play more interesting, such as fires, strikes and solicitation by charities. These are well executed and allow interaction by players with the program. Beginners are aided by a special memo which points out basic strategies and hints. They are helpful but usually not much more than common sense. The packaging is typical SSI. The large spacious box (which allows the game disk to slip out of its cover--beware) contains a well printed manual, short rule card and planning sheets. While the manual is a good introduction to micro-economics, it's a poor intro to the game program, resulting in some play being necessary to familiarize yourself.

While an excellent program, the casual gamer may find his interest wane after a short time. This game is best suited for those who are interested in

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marketing simulations and are willing to expend the time needed to play them well.

Robin D. Roberts



ESCAPE FROM ARCTURUS

ESCAPE FROM ARCTURUS is played in two modes. In the "Space Fortress" mode you are surrounded on all sides by alien attack bases which are firing photon torpedoes at you. You cannot destroy these bases, you simply try to survive as long as possible. The G J Y and Space keys form the diamond-shaped pattern that fires your gun. You can take three hits from photon torpedoes before you are destroyed, and you get a bonus ship after 2000 points for doing so. If you shoot and hit nothing, it deducts 10% from your energy supply. When your energy supply reaches zero, you cannot fire. Every time you hit a photon torpedo or attacking ship, you add 1% to your energy supply. When they start making shield attacks, the shields slowly move toward you while the bases are firing photon torpedoes. These shields protect the photon torpedoes so you have to wait until the photon torpedoes get close to shoot them. There is a 200 point bonus for surviving a shield attack. After the shield attack comes the circling attack ships which are worth 50 points. After you survive the circling attack ships, the bases start firing photon torpedoes again only this time the action is a lot faster. Later on, you will be attacked by spiraling ships, worth 50 points.

In the "Escape" mode you evacuate people from the planet Arcturon while protecting the planet from the attackers from outer space. The attack comes from three types — troop transport saucers, commando ships, and fighters. They are all worth 10 points each. If one of the ships reaches Arcturon, one of your factories is destroyed. You start the game with three factories. At each 1000 points, you gain another factory. As soon as all your factories are destroyed, the remaining inhabitants of Arcturon will blow up the planet to avoid being made slaves of the invading Griplems.

Your evacuation ship is controlled by the paddle which moves it up and down on the screen and the paddle button fires your laser. Every once in a while, a space storm will occur. This means the attacking ship will be thrown about in a random fashion, making it extremely hard to hit. The transport ship attacks straight on. The commando ships are very small and fast and come in on an angle. The third type are the slowly moving fighters.

The high score for each mode is saved on disk which is a nice feature. The graphics are good in the "Fortress" mode and outstanding in the "Escape" mode. As current arcade games go, however, **ESCAPE FROM ARCTURUS** tends to be a little simplistic.

ESCAPE FROM ARCTURUS, by Synergistic Software, runs on the Apple II computer with 48K in RAM. Paddles and disk drive are required. The price is $35.00.

Bob Boyd



ON-LINE ADVENTURE GAMES

MISSION: ASTEROID, MYSTERY HOUSE and THE WIZARD AND THE PRINCESS (three adventure type games by On-Line Systems) follows the traditional two-word adventure game format, with one interesting exception. In addition to a text description you get a hi-res graphic view of the scenes.

The gaming system is easy to learn with the program containing a basic vocabulary of some 300-400 words. You give two word commands involving a verb and a noun and the computer responds with the appropriate actions. Though on the surface the system appears uncomplicated, the games themselves provoke a flurry of mental

activity. All of your wits are needed as you encounter one problem after another. Solving particular situations may take you just a few minutes while others may take several hours (perhaps even weeks) to conquer.

Movement is totally in your hands as you command the computer to perform various actions. The color graphics are superb, providing the amateur sleuth with surprises and entertainment galore. MISSION: ASTEROID is the simplest of the group and only requires a few hours to solve. MYSTERY HOUSE is considerably more difficult and provides many traps for the unwary in a wonderfully Victorian setting. THE WIZARD AND THE PRINCESS has the best graphics and has a beautiful fairy tale setting as its theme. Of the three it was the most challenging and should be attemped only after you are familiar with the gaming system.

The only drawback to most "adventure" type games is the necessity of limiting commands to just two words. Many actions seem to require more words than are contained within the program's vocabulary. However, if you experiment enough with different terminology, you can overcome this potentially frustrating experience. One hint to aid you in solving these adventures is to "get" any and all objects you can as they will come in handy at some point in time.

The "save game" command is a particularly useful feature. If you can solve these games in one sitting you are truly a master at puzzle solving. It will probably take many sittings and you may wind up being stumped at some particularly difficult point. Have no fear, ON-LINE SYSTEMS thoughtfully include a panic number which the hopelessly frustrated can call during reasonable daytime hours.

All three games run on the Apple II or Apple II Plus computers (48K diskette).

Mark Marlow

ZORK

ZORK is an excellent adventure game. It has several nice features--it allows more than two words in a command, it allows multiple commands on one input line, and continually shows both score and turns used. Although it does access the disk, it is quick--no waiting five minutes for moves.

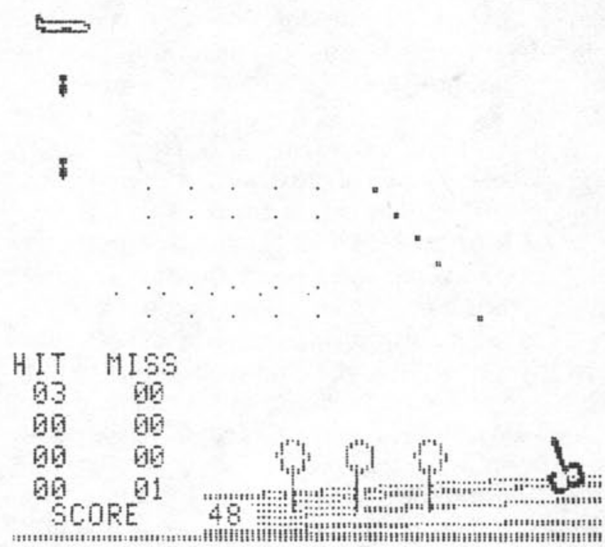
Strategy for ZORK is similar to that for any adventure game. A map is necessary, as well as a list of where things are. In ZORK, there are more objects to tote around than in most other adventures, so planning is necessary. There are also twenty treasures to find, and the battery-powered lamp gets dim all too soon. There are two other sources of light, but they can be lethal.

There are many puzzles to solve: how to put your treasures away once you find them, how to get west of the timber room (with light, so you don't get eaten by a grue), how to open the egg, how to get the water out of the reservoir (especially without harming yourself), etc. Fortunately, ZORK has an exceptionally large vocabulary to accomplish all this.

If you have trouble finding out where the dungeon is, the trap-door is under the rug in the living room of the house. If you have trouble getting in the house at all, look for a window. Any further clues would spoil the fun, so I'll keep mum from here.

ZORK is a program that is worth the money for anyone even mildly interested in adventure games. Those that like puzzles will have their fill, I'm sure. Master adventurers will even take a while on this one.

Deirdre L. Maloy



BLITZKRIEG

BLITZKRIEG is a high-res arcade-type game in which the player mans an anti-aircraft gun and attempts to destroy enemy bombers and fighters. The shells follow a realistic looking trajectory that is appealing to the eye. It's fun to watch a well aimed shell arch up into the sky, intercept an enemy plane and see the succeeding explosion and debris knock out other planes. Destruction! Rah! There are two versions (1979 and 1980). While the old version only ran at one speed, the new version has ten speed levels, each level being faster and yielding more points for each destroyed plane. At low speed levels the shells arch gracefully like a well hit 9-iron and the planes glide leisurely by. At

high speed levels the shells are more likely to resemble water drops flying out of a fountain and the planes streak by ("who was that masked bomber?"). Which strategy should you use: slow, easy to hit planes that yield small points per plane or fast and elusive planes that score big for each hit? If you can avoid being taken out by the bombers as they drop their deadly loads on your gun, the higher difficulty levels will yield the higher scores. But be warned, the "if" in the preceding sentence is a very large one. While the old version had bombers, it was a rare "lucky" shot that took out the gun. The bombers in the updated version are much more deadly. You will find that one of the lifesaving techniques you must quickly learn is the fine art of hitting the bombs as they come hurling down upon you. I have often nailed the bomb just "inches" above my gun. I have just as often missed that same bomb and payed the penalty of losing the rest of my shots as well as the 50 points that are deducted from your score in such cases.

The 1979 version kept tabs on the number and types of planes hit as well as missed, but you had to decide for yourself the relative value of each kill and/or miss. The new version has taken care of that by assigning points for each plane type relative to the speed level you select. It should be noted that fighters are 3 1/2 times more valuable than bombers at speed 0 but only 1/5th more valuable at speed 9. It is therefore best to concentrate on fighters in the low speed games (where you have a half-way decent chance to hit them) and concentrate on the easier-to-hit bombers in the high speed games.

There are many excellent arcade games on the market today, but I still find myself coming back to BLITZKRIEG as one of my abiding favorites.

BLITZKRIEG, by Programma/Hayden, runs on the Apple II (32K min.)computer. It is written in machine language. $19.95

Daniel Hockman

ULTIMA

ULTIMA is one of the best computer fantasy role-playing games to date. It is also one of the few games that allows the use of two disk drives (in fact, it is better if you have two). One unique feature of **ULTIMA** is that the technology improves as the game goes on. At the end, the player is in outer space, in a very well-done arcade-like segment.

The dungeons in **ULTIMA** are drawn in 3D graphics (similar to those in **ALKABETH,** but of higher quality). In the dungeons, the player kills monsters for experience and gold and when the character leaves, he will gain hit points. To prevent this, there are several very nasty monsters, such as gelatinous cubes which lunch on armor, and gremlins which steal food. One thing to remember in **ULTIMA** is that when hit points are gone, they are gone for good.

As the technology improves, so do the available armor and weapons. At first, nothing better than a mace will be available, but near the end the player can buy (or steal) phazors, blasters, vacuum suits and reflect armor. Weapons and armor can be stolen from cities and castles, but watch out if the character gets caught! If caught in a castle; from then on he will always be caught on the first attempt to steal in that city.

The two castles on the map are useful. The king can give the character hit points if he gives the king gold, and the king will raise statistics or give a valuable gem if the character completes a quest. One of the quests is to kill a gelatinous cube, which can be found on the third floor of a dungeon. The other quest is to find the Pillar of Knowledge, which can be reached only by boat or air car.

The only real bug this program has is reincarnation. It is possible to be reincarnated into the middle of the ocean! Since reincarnation causes you to lose many posessions, there is no way of getting back on land (you can't walk on water!). The only way out is to reset the game or get killed by a monster. The other disappointment is incomplete documentation, although what is there is nice. There are two sides to the diskette, which is somewhat confusing at first, since it isn't explicitly stated.

Deirdre L. Maloy

THE BATTLE OF SHILOH

On April 6, 1862, General Albert Sydney Johnston led his 45,000 confederate troops in a desperate attempt to save western Tennessee from invasion. Johnston's plan was to catch the army of U. S. Grant by surprise and capture their camp and supply points on the Tennessee River. It almost worked, but the outnumbered Northern forces wouldn't give up. They kept the Confederates from breaking through to the river on the first day, and that night 25,000 fresh Union troops ferried across. On April 7, Grant counter-attacked and drove the Southerners from the field.

THE BATTLE OF SHILOH by SSI allows you to refight this battle in a few hours. You can play against a friend or play either side against the computer. You can even have the computer play both sides if you like spectating.

The game is much like a board wargame. It is played on a map covered with hexagons, 11 high by 19 wide. When you start the game, you have two options which are very nice touches: you can omit the hexagons -- it's easy to play with out them and the map looks better -- and you can indicate whether you're using a B&W or color monitor. In color, the map looks very nice -- the white brigades (little men pointing rifles) stand out readily against the blue rivers and streams, green woods, and orange hills.

The 16 Confederate brigades enter on the left side (South) and try to capture Pittsburg Landing on the right edge. Between them and their goal are 14 Union brigades who must slow down the attack, standing their ground when they can and retreating when they must. Each brigade has a combat strength based on its historical performance but this strength will change constantly with combat losses and reinforcements. A point system keeps track of losses and lets you know how you're doing compared to the actual battle. It is fairly easy for the Union forces to hold out until evening (when 11 fresh brigades arrive) but very hard to do so without losing the game due to heavy casualties.

My major complaint about SHILOH is the manner in which the designer compensated for the weakness of the computer. It has trouble moving units efficiently, so to make up for this it gets to move them farther. Computer-controlled units get about double the movement allowance of the same forces under human control. This seems to be too much; it certainly produces drastic differences in strategy in what is primarily a game of manuever. I think human vs. human is the best game for both balance and historical accuracy.

You can choose to play either the full 2-day battle or just the first day. In the 2-day affair, the South will always be ahead after the first day and must try to hold on to this lead. In the 1-day game, the North gets 75 extra points, about right for a game between 2 humans but not enough to hold off the computer. If you find the regular game too hard or too easy, you can increase or decrease the strength of each side independently. Unfortunately, you can't change their movement allowance.

This is a very well designed product. Although it will take at least 2 hours to play the first day (and as much as 5 hours for both days), there are no periods of inactivity longer than 5 seconds or so. The game is absorbing; you are constantly making decisions and watching for weaknesses in the enemy.

THE BATTLE OF SHILOH, by Strategic Simulations Inc., runs on a 48K Apple II with Applesoft in ROM (or equivalent). $39.95

Bob Proctor

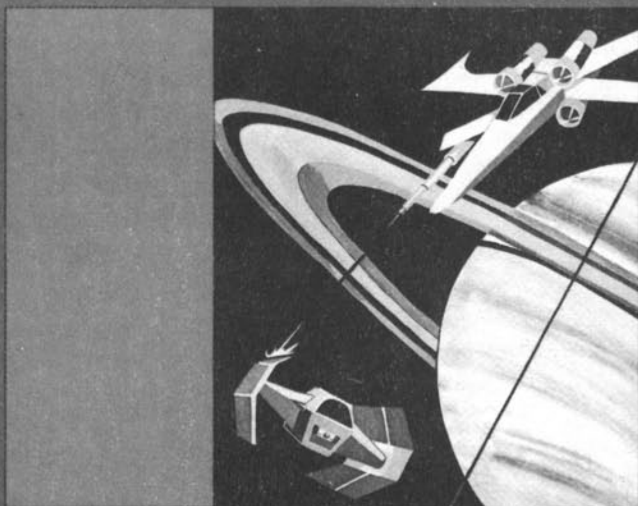
THE SHATTERED ALLIANCE

Rome attacking the Gates of Mordor; Gondor vs. the Vikings; it's all possible with **THE SHATTERED ALLIANCE** from SSI. It offers a choice of seven scenarios plus many you can create with the fourteen armies provided. This game has the new Rapid-Fire system which makes the game play as fast as you can type in the orders with the maps and units shown in beautiful hi-res color. To play, you must first pick a scenario - historical, fantasy, or a little of both. Once the game is set up and the armies displayed, the computer will begin the game by lighting one of the units. Now you enter your command. The flashing unit can either use spells, be moved, or attack. As soon as you key it in, it's done -no waiting for the computer. Play continues until one army's morale reaches zero. That army then sounds retreat and routs.

Combat can be by melee or missle weapons with all weapons getting bonuses or handicaps, dependent upon the opposing troop's type and armor, (i.e. a javelin works better against light infantry than it does against heavy cavalry). The five types of terrain also affect the battle. After each battle, the forces are modified to reflect casualties, and the updated force list is shown. Various spells may also be used which can provide greater mobility, protection from attack, combat effectiveness, or increased troop morale.

Play is offered in three forms: player vs. player, player vs. computer, and computer vs. computer. An excellent feature of this game is that the computer can play either side. This way you can never feel the computer has the advantage as, in the next game, you can play the opposite side of the same battle. There are also two skill levels, beginner and advanced, which can modify the scenerio by adding to an army's strength and/or morale.

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ARCADE ***NEW*** *GAME*

ESCAPE FROM ARCTURUS

A fast action dual mode high-res arcade style game with excellent color graphics and sound effects. In command of the Space Fortress you fend off powerful attackers from all sides. The attacking Griplems use several different ships, force fields and weapons in ever increasing numbers and speed. Once you take charge of the Arcturon ESCAPE ships you must battle a variety of invading Griplem landing craft. Control your ship with paddle or joystick while trying to ESCAPE into hyperspace. Provides more variety, challenge and choices than other arcade games.

Full Color – High Speed – Machine Language
Requires 48K, disk with DOS 3.3, Applesoft and paddles.
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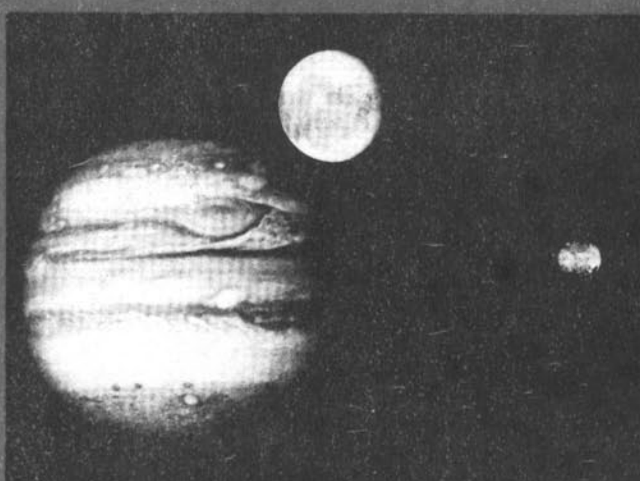
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Requires 48K, disk with DOS 3.3, Applesoft or Integer.
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EDUCATIONAL ***NEW*** *SOFTWARE*

THE PLANETARY GUIDE

This colorful high-resolution handbook puts the solar system at your fingertips. The Planetary Guide is a new and exciting way to learn astronomy as you follow the program from the moon and sun, to the planets and their orbits, to comets and asteroids. All major solar system members are displayed in detail. Moon phases and planetary movement are animated on high-res screens. Pick your date and see the location of all planets in orbit as well as where each planet is listed in each constellation. Graphic displays along with text data and detailed tables provide as well as where each planet appears in each constellation keystroke commands allow rapid access to any of the general purpose or detailed programs.

Great with The Star Gazer's Guide.
Requires 48K disk with DOS 3.3, Applesoft
$30.00

Synergistic Software
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All programs require Apple II or Apple II Plus. See your dealer for these and other fine Synergistic Software products or order directly.

Scenarios are saved on a scratch disk, which the program initializes, but you must supply. Games may be saved, in progress, on the same scratch disk. The game's limitations lie in that the most units any army has is eight, and the armies are all predetermined. You must choose from the armies given, which connot be modified in anyway. Additionally you are limited as to which armies you can pit against each other. For example, you cannot put the Roman army on both sides of the battle. Neither can you match Carthage against Rome to recreate battles in the Punic Wars (although both armies are in the game system). SSI says that they can put out a utility disk which will not only allow you to pit any of the armies against one another, but will also allow you to make up the composition of the individual units themselves. SSI will make this disk available if there is enough interest. If you are interested, drop them a note.

The above mentioned problem aside, the graphics are excellent, and the Rapid-Fire system makes playing fast and easy. All in all, I feel **THE SHATTERED ALLIANCE** is a very enjoyable game.

THE SHATTERED ALLIANCE, by Strategic Simulations, runs on the Apple II computer (48K with Applesoft in ROM). $59.95

Bob Boyd



Continued from page 22

never materializes. A hatch won't open. The game sometimes hangs up. And, when these difficulties are finally surmounted, and victory is achieved, the end of the game is a bit of a let-down.

Still, **PROTECTOR** represents a breakthrough of sorts. The music in the program is excellent, and remains constant throughout the game--with the result of adding much character to its play. When your ship is downed, an ambulance shoots out to drag you away. The overall result is humorous--at least until frustration sets in!

It's been nearly a year now since Atari let its secrets out. The rewards are now beginning to be realized. Atari graphics are far and away the best around; this fact is even more apparent from these and other third party software vendors.

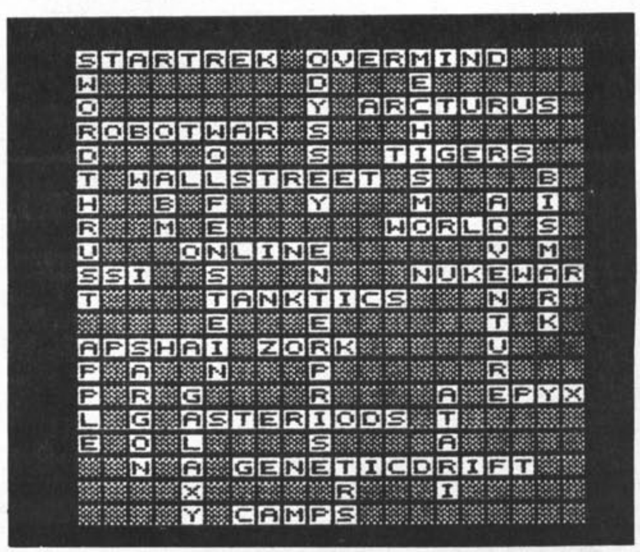
Continued from page 23

1976 CINCINNATI REDS

Name	Pos.	B	G	AB	R	H	2B	3B	HR	RBI	BB	SO	SB	BA	FA
T. Perez	1B	R	139	527	77	137	32	6	19	91	50	88	10	.260	.996
J. Morgan	2B	L	141	472	113	151	30	5	27	111	114	41	60	.320	.981
D. Concepcion	SS	R	152	576	74	162	28	7	9	69	49	68	21	.281	.968
P. Rose	3B	S	162	665	130	215	42	6	10	63	86	54	9	.323	.969
K. Griffey	RF	L	148	562	111	189	28	9	6	74	62	65	34	.336	.979
C. Geronimo	CF	L	149	486	59	149	24	11	2	49	56	95	22	.307	.985
G. Foster	LF	R	144	562	86	172	21	9	29	121	52	89	17	.306	.994
J. Bench	C	R	135	465	62	109	24	1	16	74	81	95	13	.234	.997
D. Driessen	UT	L	98	219	32	54	11	1	7	44	43	32	14	.247	.994
D. Flynn	IF	R	93	219	20	62	5	2	1	20	10	24	2	.283	.985
M. Lum	OF	L	84	136	15	31	5	1	3	20	22	24	0	.228	.999
E. Armbrister	OF	R	73	78	20	23	3	2	2	7	6	22	7	.295	
B. Bailey	OF	R	69	124	17	37	6	1	6	23	16	26	0	.298	

Pitchers	THR	W	L	G	GS	CG	IP	H	BB	K	ERA
G. Nolan	R	15	9	34	34	7	239	232	27	113	3.46
P. Zachry	R	14	7	38	28	6	204	170	83	143	2.74
F. Norman	L	12	7	33	24	8	180	153	70	126	3.10
D. Gullett	L	11	3	23	20	4	126	119	48	64	3.00
R. Eastwick	R	11	5	71	0	0	108	93	27	70	2.08
P. Borbon	R	4	3	69	1	0	121	135	31	53	3.35
W. McEnaney	L	2	6	55	0	0	72	97	23	28	4.88

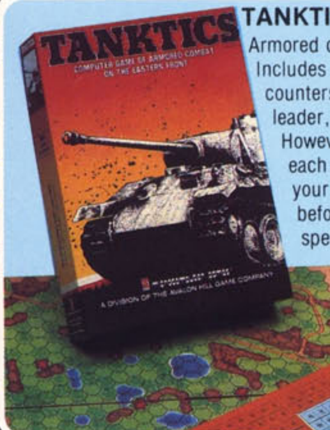
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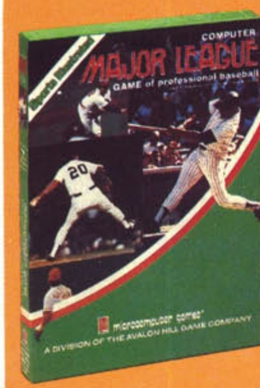
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24K cass: Atari 800 $24
32 K disk:
Apple II, Atari 800
$29



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Recreate an entire baseball season, championship or world series with real life player statistics. Avalon Hill has analyzed full season statistics for each player, converting it to computer memory so each performs in your game just as he does in reality. YOUR ability at managing could make an also-ran become a pennant winner.

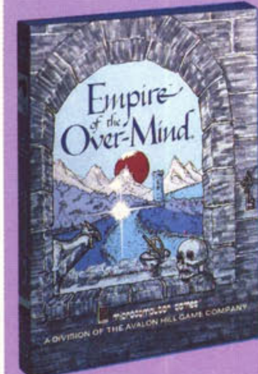
16K cass: TRS-80 Model I	$25
32K disk: TRS-80 Model I	$30
48K disk: Apple II	$30



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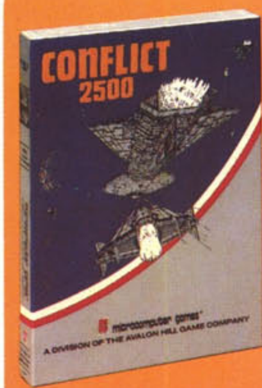
40K cass: Atari 800	$30
48K cass: TRS-80 II, Apple II	$30
48K disk: TRS-80 II, Apple II	$35



MIDWAY CAMPAIGN

Your computer controls a huge force of Japanese ships whose objective is to invade and capture Midway Island. In the actual engagement, the Japanese made several tactical errors which cost them the battle. Your computer probably won't make the same mistakes! You command the badly outnumbered and outranged U.S. Naval Forces. Your only advantage is surprise.

16K cass: TRS-80 II, Apple II, Pet 2001	$15
32K cass: Atari 800	$15
32K disk: TRS-80 II, Apple II	$20
40K disk: Atari 800	$20



CONFLICT 2500

In 2500 AD, earth is threatened by attacking aliens programmed with an infinite number of attack strategies with which to tease the player who must defend earth. A variety of spaceships on the screen adds an extra dimension to the excitement and suspense of this clever SF game.

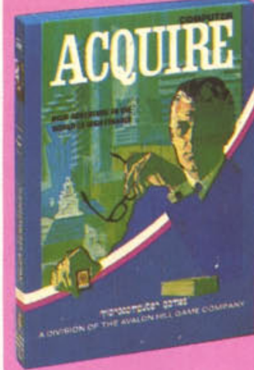
16K cass: TRS-80 II, Apple II, Pet 2001	$15
32K cass: Atari 800	$15
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LORDS OF KARMA

Like an intriguing puzzle! The fun is in deciphering secrets while exploring a mythical, magical city and countryside, while at the same time avoiding lurking monsters. You tell tho computer what you want by typing simple sentences. The computer has many surprises in store.

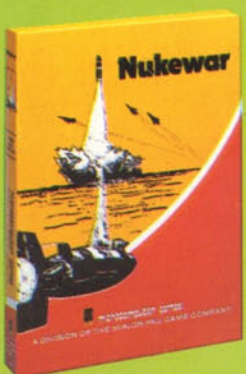
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48K cass: TRS-80 II	$20
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COMPUTER ACQUIRE

The object of the game is to become the wealthiest person in this ''business'' game about hotel acquisitions and mergers. For 2 to 6 players it is a subtle game of interplayer strategy. As a SOLITAIRE game you play against the computer. One can even pit the computer against itself in this faithful recreation of the classic board game.

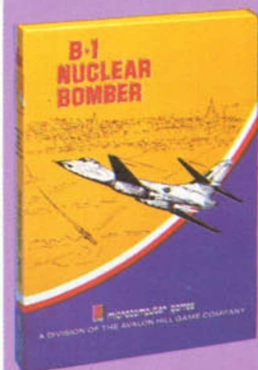
16K cass: TRS-80 II, Apple II, Pet 2001	$20
32K disk: TRS-80 II, Apple II	$25



NUKEWAR

Nuclear confrontation between two hypothetical countries. Defend your country by massive espionage efforts, or by building jet fighter bombers, missiles, submarines and anti-ballistic missiles. Your cold and calculating computer will choose its own strategy! Very fast paced for players of all ages and levels of experience.

16K cass: TRS-80 II, Apple II, Pet 2001, Atari 800	$15
24K disk: Atari 800	$20
32K disk: TRS-80 II, Apple II	$20



B-1 NUCLEAR BOMBER

You are the pilot of a B-1 bomber on a mission over the Soviet Union. You must fly through stiff Russian defenses to the target city, bomb it and return home. Your computer controls the Soviet MIG fighters and surface-to-air missiles. You must rely on your electronic counter measures and self-defense missiles.

16K cass: TRS-80 II, Apple II, Pet 2001	$15
24K cass: Atari 800	$15
32K disk: TRS-80 II, Apple II	$20



PLANET MINERS

One to four players compete with each other and the computer to stake valuable mining claims throughout the solar system in the year 2050. Each player must decide which ships to send to which planets and when to try ''dirty tricks'' like a sabotage and claim jumping.

16K cass: TRS-80 II, Apple II, Pet 2001	$15
24K cass: Atari 800	$15
32K disk: TRS-80 II, Apple II, Atari 800	$20



NORTH ATLANTIC CONVOY RAIDER

In the Bismarck convoy raid of 1941, the computer controls the British convoys and battleships. Will the Bismarck sink the Hood, only to be sunk by the Rodney and King George V, as in history? Or, will the Bismarck cripple or sink the British Home Fleet and go rampaging through the convoy lanes?

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